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The Mac Experts

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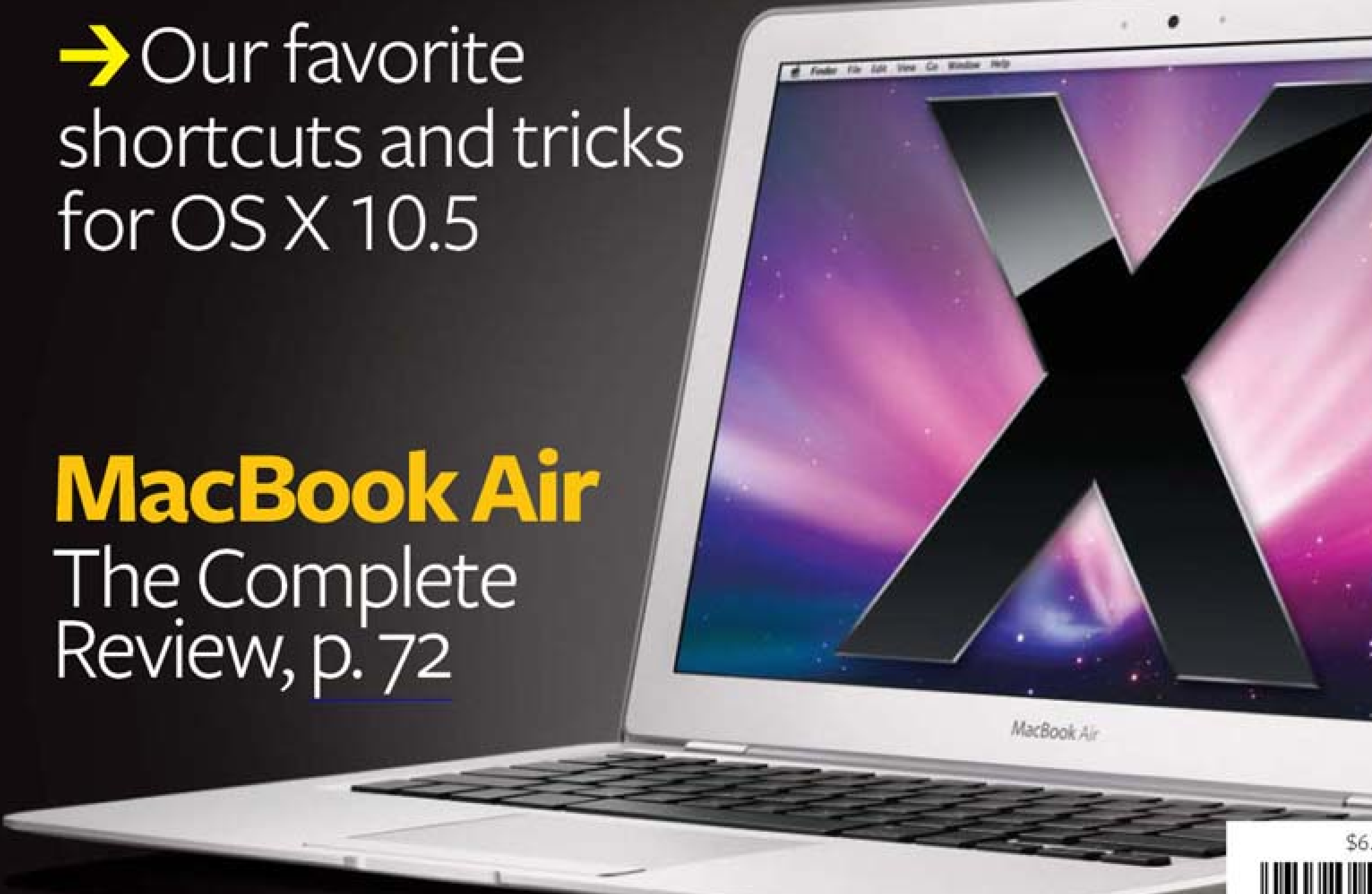

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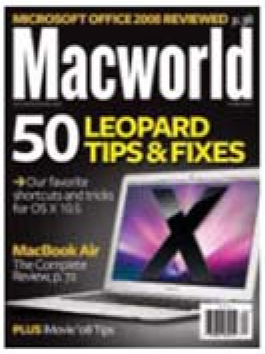

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Photograph by Peter Belanger

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The top 5 stories on Macworld.com are:

1 **Expo Keynote—Live Update**
Check out *Macworld*'s live coverage of Steve Jobs's keynote address at Macworld Expo (macworld.com/3389).

2 **Apple Introduces MacBook Air**
Apple unveils its new skinny—and pricey—laptop (macworld.com/3390).

3 **Expo Slideshow: Day 1**
Check out pictures from the show floor on the opening day of Macworld Expo (macworld.com/3391).

4 **Hands On with the MacBook Air**
Jason Snell details his precious 20 minutes with Apple's latest laptop (macworld.com/3392).

5 **The 23rd Annual Editors' Choice Awards**
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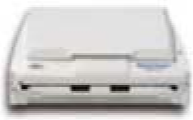

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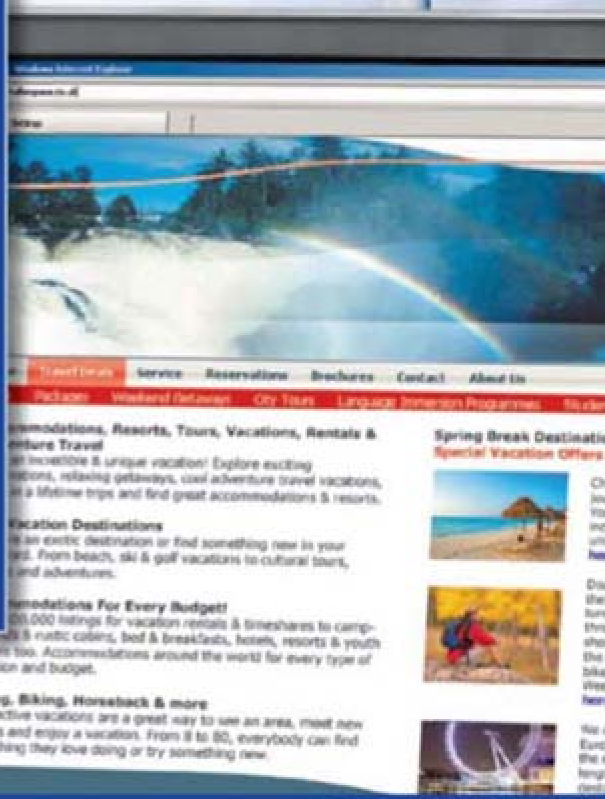

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FROM THE EDITOR'S DESK By Jason Snell

The MacBook Air Diet

Fitting your data on a skinny laptop isn't easy

The first thing I did upon learning that I would be reviewing the MacBook Air (page 72) was sigh heavily. Not that I wasn't excited about playing with Apple's latest (and lightest) laptop. No, my sigh was one of realization: my current MacBook's 160GB hard drive was nearly full. The MacBook Air's drive is 80GB. I was going to have to remove *half of the data* from my hard drive in less than a week.

PHOTOGRAPH BY PETER BELANGER

Media Is for Suckers

My first step was to move older files—the ones I wanted to have at the office but don't need on the road—to my old 120GB external backup drive. (I recently got a snazzy 500GB external drive to use for Time Machine backups.) It became a lifeboat for my MacBook's dispossessed files.

First to go into the lifeboat: the iTunes Store and Amazon MP3 purchases that have been collecting on my MacBook's drive since I began purchasing music online.

Video files met one of two fates: if they were useless, they moved to the Trash; if I thought they might still have some use, I migrated them to the lifeboat. Likewise with my iPhoto library.

Should Old E-mails Be Forgot?

Second on my to-go list: work files dating back to the mid-1990s, every e-mail message I've received since 1995, and a transcript of every iChat. Occasionally, I have to search through those files. So in the interests of fitting into my skinny new hard drive, I put all that on the external drive.

Next up: programs that I downloaded a zillion years ago, used once or twice, but never deleted. Those went into the Trash, along with Application Support folders for programs that I had long since deleted.

Unfortunately, all that still wasn't enough. So next I took a walk through my Applications folder and cut any program that I hadn't used recently. Three different shareware utilities that do the same thing? I picked the one I use the most often and canned the rest.

> **I was going to have to remove half of the data from my hard drive in less than a week.**

Then, in the Finder, I pressed ⌘-F to bring up a Spotlight window, and found all files with *dmg* in the name. I had a huge number of old software downloads on my hard drive. Most have been supplanted with newer versions. I deleted 80 percent of them.

Just under the Wire

After a few hours of work, I was down to 74.29GB of data—slightly less than half the total capacity of my old drive. I transferred it to my MacBook Air, using the new Migration Assistant, and I still had a couple of gigabytes to spare. (As you probably know, an 80GB drive doesn't really hold a full 80GB of data.)

Using the MacBook Air as my primary system means some big changes. For example, rather than listening to music in iTunes from my own hard drive, I'll either use an iPod or take advantage of iTunes Sharing. At home, my entire music collection is shared from another Mac, so I'm fine there.

As for my other documents, I guess I'll discover soon enough if the inability to access those files on a moment's notice is a nuisance, a major inconvenience, or simply a subject that never comes up. I won't know until I try.

Desperate Measures

As I emptied my Trash one last time, a final thought occurred to me: the MacBook Air I was testing came with one of the standard 80GB hard drives. But in a week or so, we'd be getting the one with the 64GB solid-state drive. Would I be able to squeeze my data even more, to fit on the even smaller drive? If I was going to have to delete another ten gigabytes from my drive, I suspected my sanity wouldn't survive the attempt.

In the end, my only recourse was to move my 10GB Windows disk image from Parallels Desktop to an external drive. By compromising my ability to run Windows whenever I wanted to, and by trimming more data and programs, I was able to fit within the narrow confines of that 64GB drive.

My MacBook austerity program taught me a few things. First, I learned that a lot of the data on my old, large hard drive was unnecessary, and remained there only through benign neglect. Second, I discovered that with a few changes of habit, I could reduce the amount of data I needed to carry around with me. And third, I realized that while you can use the MacBook Air as your main system, it's better as a complement to a desktop Mac or some serious external storage.

The final lesson I learned: while I really do like the MacBook Air, I'm swapping this 64GB SSD model for the cheaper, 80GB hard-drive variety. Those last ten gigabytes are killers.

How much data would *you* have to cut if you moved to the MacBook Air? How would you do it? Drop me a line at jason_snell@macworld.com or visit the forums at Macworld.com.

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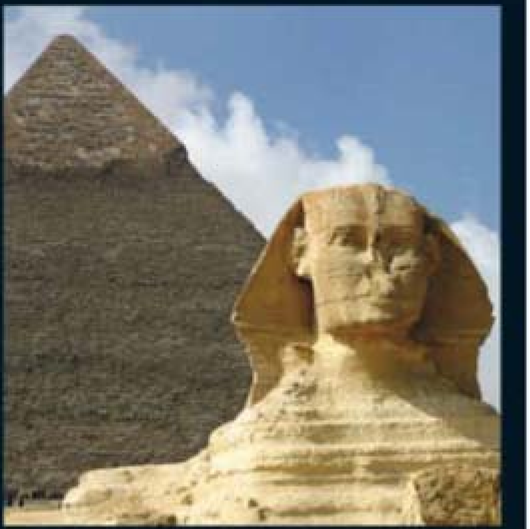

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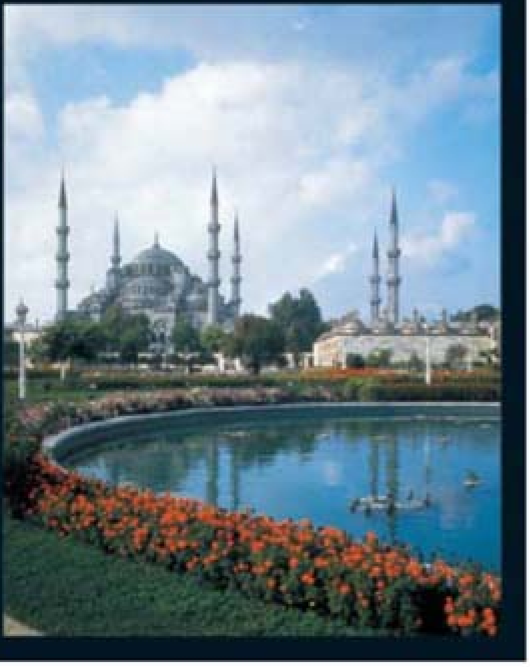

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American Photo 2007 Editor's Choice/ Digital Storage and Display: NewerTech Guardian MAXimus

-American Photo

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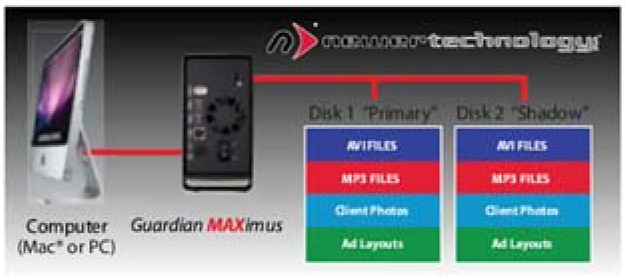
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Mac

Your Turn: Leopard

In the January issue, we had our say on the latest Mac OS. Now it's your chance.

29 Tips and Tricks for iLife '08 p.74
Macworld
LEOPARD!
300+ New OS X Features
The Complete Guide to OS X 10.5
How to Make the Upgrade
Automatic Backups with Time Machine
The Desktop and Finder, Redesigned
PLUS 7 Budget-Friendly Monitors

Leaping into Leopard

Thank you to *Macworld* and to all the people who contributed to the feature article "Leopard Lands" (January 2008). Though I'm still a Mac beginner, I found it well worth the price of my subscription.

Barbara Fontana

Your January 2008 issue loudly praised Mac OS X 10.5, but was completely silent about its shortcomings. The loss of support for OS 9 in particular is a deal breaker for me. Until someone comes out with a way to support Classic under Leopard, the upgrade will just have to wait.

Bob Samuelson

I work for a small advertising agency, and we have 38 Mac towers. When Mac OS X 10.5 came out, I purchased two copies of it and installed them on our two Mac Pros. During the past week, I have received an average of 20 support calls per day from these two computers; even after we upgraded to 10.5.1, the call volume didn't decrease. By comparison, the other 36 computers in the office generate an average of two or three calls per day. I am recommending to the agency's owner that we upgrade those other machines to 10.4.11 instead of 10.5.

Gus Marsh

Installing *any* new software will cause an increase in support calls. But did Leopard cause an unusually high increase—more than, say, Mac OS X 10.4 when it was first released? As best we can tell so far, no. But we'll continue to look into it.—Dan Miller

OVERHEARD ON THE FORUMS

Considering how ugly Office 2008 looks, I will never upgrade. Office 2004 works just fine.

hillstones
macworld.com/3343

A lot of people who bag the Apple TV just look at the feature set and say it's missing heaps of features found on other devices. But it's simple and elegant, and gets its job done.

russellb
macworld.com/3344

How clever of you to include the article "Tracking Down Trouble with the Console" (*Geek Factor,* January 2008) in the same issue as your Leopard coverage, because I've been putting the Console to much use since I upgraded my year-old MacBook Pro to Leopard. I've had problems with Address Book, iCal, Disk Utilities, and other system elements. By "problems," I mean things like my iCal data getting corrupted to the point where I had to reenter it all by hand. I wish I'd stayed with OS X 10.4. Judging by the online forums, I'm not alone. Apple should have invested more time in the Leopard beta.

Mike Nemeth

I've been surprised to read about the problems some people are having with Leopard. I installed it on my G5 and MacBook and have had no problems with it or my home network. It has been a real hit with me and, I'm sure, with many other users.

Via the Macworld.com Forums

I've upgraded two machines to Leopard, and both worked fine except for some networking issues that I know to be inescapable. Leopard improves a lot of things, but many of its best features are bug fixes for Tiger. For example, Spotlight is a piece of trash under Tiger. It is amazing under Leopard. The Finder is barely tolerable in Tiger. OK, so it still blows under Leopard, but it blows a lot less by implementing multiple networking threads and at last allowing you to turn off the alert that appears whenever you change a file's extension.

Via the Macworld.com Forums

In "Leopard Lands," you said that iCal 3.0 is "faster to use." But it's not. It now takes two to four clicks to edit an appointment. Without the Details pane

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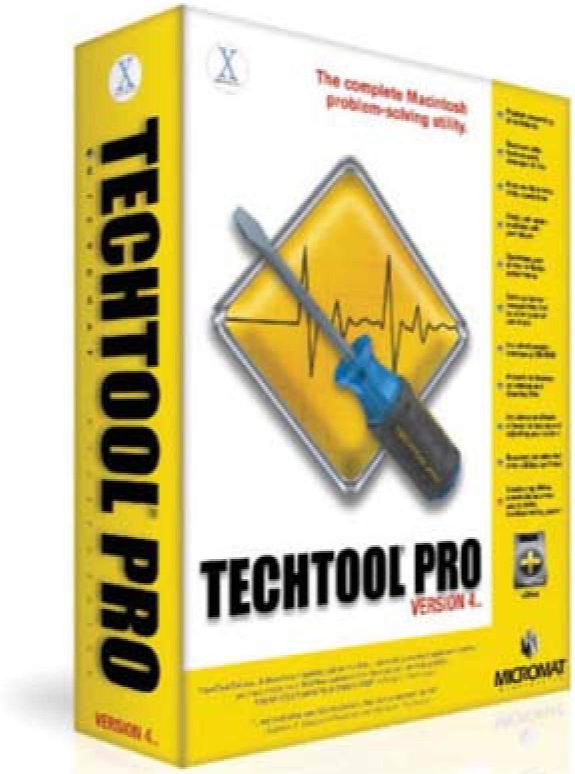
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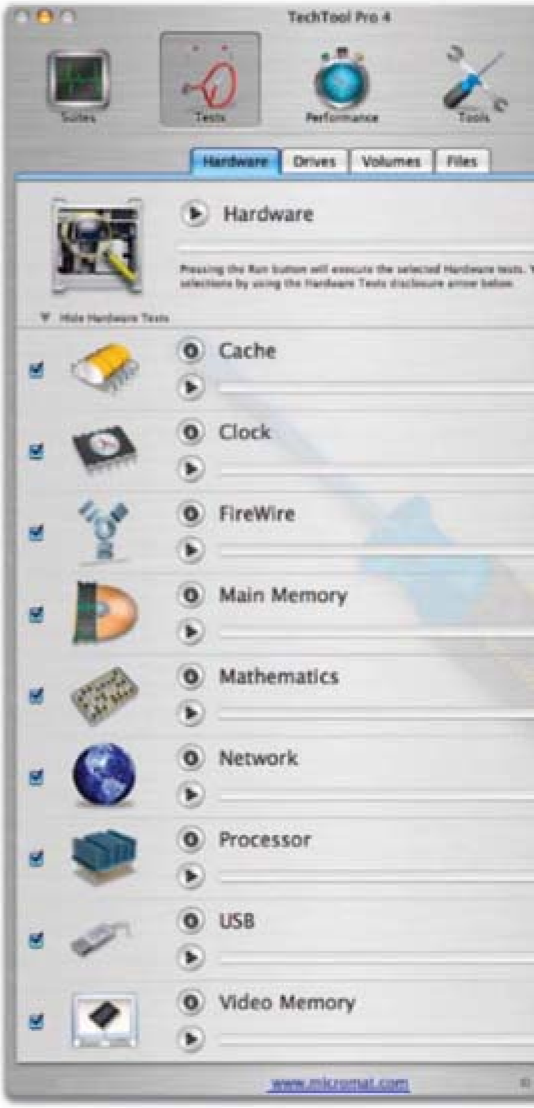
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showing its information, you have to double-click on the appointment in your calendar to see its time and notes. To change it, you have to click on an Edit button and then click on another button to save your changes. I miss the old iCal!

Alicia Katz Pollock

I found Andy Ihnatko's recent *Spotlight* column incredibly insulting ("What Leopard Is Worth," January 2008). Andy, are you seriously suggesting that someone would pay real money for a better desktop search tool? I sure wouldn't. Nineteen dollars for Spaces? Wasn't there a freeware application dating back to OS 9 that already gave us this functionality? Ninety-nine dollars for remote desktop sharing? I can do that with VNC for free (albeit with some limited functionality). Thirty-nine dollars for an iTunes-like Finder interface? Are you kidding me?

Devin Comiskey

I agree with Andy Ihnatko: SuperDuper trumps Time Machine. But I plan to use both—SuperDuper for a complete, bootable backup and Time Machine for hour-to-hour, day-to-day backups of files and folders.

Tom Rogers

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Glossy or Matte?

I've just read the letters about the new iMacs in January's *Feedback*. I bought a 2.8GHz 24-inch iMac and am extremely happy with it. The display is bright but has absolutely no reflection problems. I never see anything reflected on the display, despite the fact that there's at least one monitor directly behind me facing my screen at all times. I can view the display without distortion from very wide angles, much wider than with the NEC monitor my wife uses for her PC. The iMac is my first foray into LCD screens—my G5 uses a CRT, as does my G4—and I never thought I'd like them after seeing the ones my wife and friends use. But the iMac screen is amazing.

Kevin Thorne

Your coverage of the glossy screen on the new iMac caused me to take a closer look before purchasing. What I found is that the iMac screen reflects light fixtures, windows, and other light sources. The problem is minor when you're looking at photos or graphics. When you're looking at text, however, it is major. When the screen reflects a light source, it forces your eyes to move back and forth to try to get a clear view. This can cause eyestrain, which over time can become uncomfortable and tiresome. If you use the iMac for viewing images, the glossy screen is impressive. If you use the iMac for office work, it can cause a headache.

Don Shea

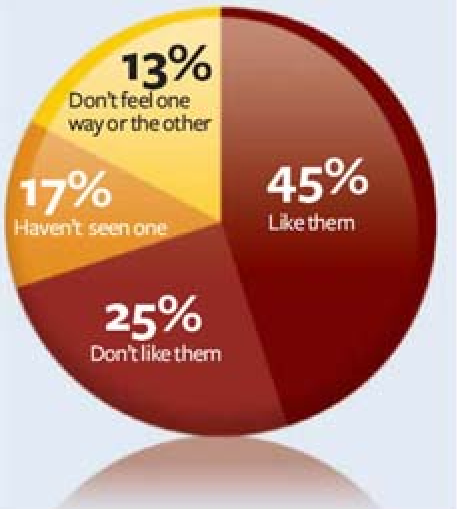
The Good and the Bad

I am writing to address all the negative items that appear in your magazine. I'd like to give subscriptions to your magazine to acquaintances who have just purchased a Mac or who are thinking about buying one. But I cannot bring myself to do so, knowing there is so much negative material about the Mac in your publication; I am afraid it will turn them against Apple completely. If I were in the market for a new computer and chose to learn something about it first by buying *Macworld*, and I then read all the negative things you publish, I would never buy a Mac.

Jerry Rader

READER POLL

What do you think of the glossy screens on Apple's laptops and the new iMac?



I started my own consulting business back in 2006. One of my first decisions was to switch back to the Mac. I grew up with an Apple IIc and a Mac Classic, but when I became a "grown-up" I found myself living in the world of PCs. When I got my new Mac laptop, a buddy convinced me to subscribe to *Macworld*. I kept up with the issues for about two months, then fell behind and let them pile up next to my desk. Recently, I started working my way through the stack. I am impressed by how useful the articles and tips are, particularly *Mac 911*. After purchasing a RAM upgrade and applying many of the tips I found in your pages, I feel like I have a brand-new computer on my hands. I plan to read future *Macworld* issues the second they arrive in the mail. Keep up the great work!

Christopher Lag

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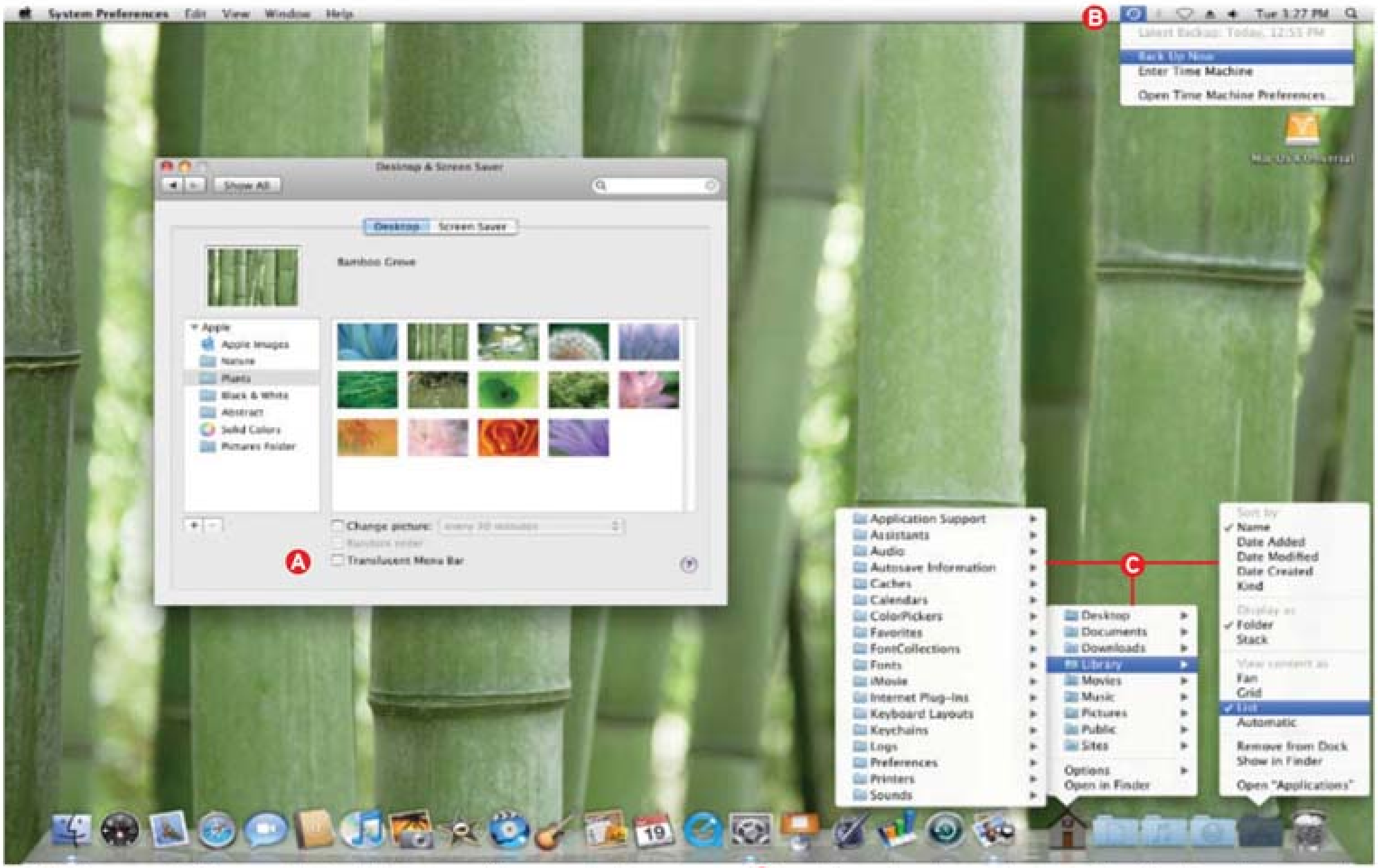
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Date Created
Kind
Display as
✓ Folder
Stack
View content as
Fan
Grid
✓ List
Automatic
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Show in Finder
Open "Applications"

☐ Change picture: every 30 minutes
☐ Random order
☐ Translucent Menu Bar

Useful Changes OS X 10.5.2 adds the ability to turn off the menu bar's translucency Ⓐ, get information about and activate Time Machine with a menu-bar item Ⓑ, and disable Stacks in favor of pop-up folders in the Dock, as in OS X 10.4 Ⓒ.

OPERATING SYSTEM

OS X 10.5.2 Comes as Welcome News

Leopard update shows that Apple listens to users **BY DAN FRAKES**

Apple periodically comes under fire for not listening to its customers—specifically, for deciding on particular features (or omitting others) and then sticking to its guns regardless of the reaction. Although some of this criticism is off base, some of it is spot-on.

Steve Jobs recently admitted that the company missed the mark with the Apple TV (and then it solved some of that product's shortcomings with a free software update). Apple followed that update with a substantial revision to Leopard. The release of the OS X 10.5.2 update shows that sometimes Apple does listen, and occasionally it even reverses design decisions because of user feedback. Consider some of the tweaks featured in this update to Leopard (and see "Your Leopard Survival Guide" on page 56 for more Leopard tips).

Hierarchical Stacks

Perhaps the most controversial changes in Leopard involve the new Dock. In addition to the Dock's much-maligned 3-D appearance, the debut of Stacks in Leopard meant the removal of a popular existing feature: hierarchical Dock menus. In Panther and Tiger, you could place a folder in the Dock and then navigate that folder's contents right there in its own hierarchical menu.

A few weeks after Leopard debuted, I evaluated Stacks, covering both its benefits and its (many) flaws. At the time, I offered a few suggestions for how Apple could "fix" Stacks. If you control- or right-click on a folder in the Dock, Leopard gives you the option to display the stack as a grid or fanned out. As I saw it, Apple could remedy the single biggest complaint about Stacks by adding an option for displaying the stack in a Tiger-like hierarchical menu. I suggested another simple improvement—letting the user choose, via a similar setting in a stack's options menu, how the stack would appear in the Dock: as the actual folder icon, as a generic icon, or as the current set-on-the-fly icon.

Perhaps the most controversial changes in Leopard involve the new Dock, with its 3-D appearance and Stacks feature.

So imagine my surprise when I installed 10.5.2 and found those options available in the options menu for each stack. (To access this menu, control- or right-click on a stack's Dock icon.)

The List View option lets you view that stack as a hierarchical menu of the folder's contents, and the Folder Display option changes the stack's icon to that of the actual folder. In addition to being less confusing, the Folder Display option lets you use custom folder icons to differentiate folders in the Dock.

Even better, the new List (hierarchical) view retains Leopard's ability to sort the list by name, date added, date modified, date created, or kind—meaning Stacks is now more functional and useful than Tiger's Dock menus were.

Unfortunately, you can't set your default preferences for these settings so that all new stacks automatically exhibit your preferred behavior; you'll have to change the settings for each stack separately. And you can't access the contents of folder aliases in the Dock (as you could in Tiger). Still, well done, Apple.

Translucent Menu Bar

Another controversial interface element in the initial release of Leopard was its menu bar. Unlike the solid-white menu bar found in every previous version of the Mac OS, Leopard's stock menu bar is semitransparent, so your desktop extends behind it. This means the menu bar's color, texture, and readability depend on your choice of desktop picture. There are ways to tweak the menu bar, but Apple hasn't sanctioned any of them.

In 10.5.2, you can now get rid of menu-bar translucency via a simple setting in System Preferences—the new Translucent Menu Bar check box in the Desktop & Screen Saver preference pane. However, note that with this option disabled, you don't actually get the old, bright-white menu bar back; instead, you get a more subtle gray version. I just may like this gray bar better—it doesn't stand out quite as much as a white bar, but it still makes menus and menu-bar icons easy to read.

Apple also tweaked the standard menu bar slightly, so that even if you don't take advantage of the new non-translucent option, menus will be slightly less transparent, improving visibility. All of these changes are simple but effective.

Time Machine Menu-Bar Indicator

Finally, some minor interface complaints have focused on Leopard's new Time Machine backup feature. In OS X 10.5.2, Apple has added a new Time Machine menu-bar item playing on the "turn back time" theme—its icon looks like a clock with a counterclockwise, circular arrow around it. Click on this icon to reveal the date and time of the last Time Machine backup. You'll also find commands to start a backup manually, to enter Time Machine (in order to recover files), and to visit the Time Machine preference pane. And because this menu-bar item is a standard Mac OS X menu extra, you can use the Keyboard & Mouse preference pane to set up keyboard shortcuts for any of these commands. For example, I've assigned a keyboard shortcut to Back Up Now; I use this if I'm about to unplug my external drive from my laptop and I want to be sure I've backed up my latest work beforehand.

One thing Apple didn't add in 10.5.2, however, was the ability to use Time Machine wirelessly with a USB hard drive and an AirPort Base Station—for that you'll need Apple's Time Capsule combo product.

Dan Frakes is a *Macworld* senior editor.

NEWS IN BRIEF

amazon.com

Amazon.com to Buy Audible

Web retailer Amazon.com announced plans to acquire audiobook publisher Audible in a transaction valued at $300 million. Audible offers over 80,000 programs, including audiobooks from best-selling authors and spoken-word content from news sources such as the *New York Times* and the *New Yorker*. Audible was one of the first companies with which Apple partnered for the iTunes Store—in 2003 the companies announced the availability of more than 20,000 hours of exclusive content. It is unknown at this time if the Amazon.com acquisition will affect Apple's relationship with Audible.

Apple Market Share to Double by 2011?

Apple's iPod and iPhone momentum seems to be translating into increased market share for Macs. In a report, "Key Predictions for IT Organizations and Users in 2008 and Beyond," market research firm Gartner predicted that Apple will double its U.S. and Western European computer market share. While Gartner praises Apple for its software integration, analysts still place much of the responsibility for Apple's rise at the feet of the rest of the industry. "Apple's gains in computer market share reflect as much on the failures of the rest of the industry as on Apple's success," Gartner analysts said in the report. "Apple is challenging its competitors with software integration that provides ease of use and flexibility; continuous and more-frequent innovation in hardware and software; and an ecosystem that focuses on interoperability across multiple devices (such as iPod and iMac cross-selling)." Gartner also predicts in its report that by 2012, 50 percent of traveling workers will leave their notebooks at home in favor of other devices. This could also be an important trend for Apple as the company solidifies its place in the market with the iPhone in the coming years.

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PHOTOGRAPH BY JUSTIN SULLIVAN

iPOD

Is the iPod Slipping?

Slow growth doesn't tell the whole story

From October to December 2007, Apple sold more iPods than in any quarter since the introduction of the mobile music player six years earlier. Record quarterly sales of 22.1 million iPods helped Apple tally $9.6 billion in revenue and a $1.5 billion profit for its fiscal first quarter.

And yet financial analysts and media reacted by clobbering Apple's stock, partly because Apple offered projections for its second-quarter performance that were below what Wall Street was anticipating, but also because the record iPod sales failed to meet expectations. Headlines proclaimed that sales figures for the music player were a warning bell for investors, that the shine was off the company, and that the iPod sales totals were plodding.

What gives? The disparity between Apple's reported iPod sales and analysts' strong reaction to those results boils down to which aspect of the iPod business you're looking at.

"Apple's results are actually quite good compared to the rest of the category," says Ross Rubin, director of analysis at market research firm NPD Group. Apple moved more than 22 million iPods last quarter, keeping the company lodged securely in first place in the digital music player market in December with a share of 67 percent, according to NPD.

What the analysts and the media were reacting to was a lack of big growth in iPod sales during the previous year. For the fiscal first quarter of 2007, Apple sold 21 million iPods, meaning that year-over-year, the iPod unit sales grew only 5 percent—still an increase, though not the kind of robust growth Wall Street had come to expect.

Over the last few years, iPod sales numbers have shown dramatic growth, particularly in the quarter that encompasses holiday purchases. The number of iPods Apple sold in the first quarter of 2007 was 50 percent higher than what it sold in that quarter the previous year. In the first quarter of 2006, iPod sales grew 207 percent, while in the first quarter of 2005, iPod

PRODUCT WATCH

HARDWARE

D60, from Nikon (www.nikonusa.com): The 10.2-megapixel digital SLR camera features a new digital image processor and offers the ability to optimize shadow and highlight detail (pricing not yet announced).

EOS Digital Rebel XSi, from Canon (www.usa.canon.com): This 12.2-megapixel digital SLR camera features improved autofocus compared to previous Rebel models, enhanced 14-bit analog-to-digital conversion, and enhanced Live View for the 3-inch LCD (body, $800; with 18mm–55mm lens, $900).

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sales shot up an astounding 525 percent compared with the same quarter a year before.

While total unit sales this past quarter were higher than in the first quarter of 2006, the rate of sales growth fell.

And the holiday quarter wasn't the only one to see slower growth in the past year. For Apple's 2007 fiscal year, fourth-quarter iPod sales grew 16 percent over the previous year, third-quarter sales rose 21 percent, and second-quarter figures rose 23 percent—again, all positive numbers, but in 2006 those quarterly iPod sales grew by 35 percent, 31 percent, and 60 percent, respectively. Clearly, iPod sales growth has been slowing for at least the past year; and even though the number of iPods sold each quarter continues to trend upward on the whole, it is increasing more slowly than it has in the past.

Then again, slowing growth isn't really a surprise. Apple would have had its work cut out for itself if, say, it had hoped to sustain the 525 percent growth rate of 2005's first quarter: that would have required selling 28 million iPods in the first quarter of 2006, more than 174 million for the 2007 quarter, and an outrageous 1 billion iPods in the most recent quarter.

Keep in mind that, as of April 2007, Apple sold its 100 millionth iPod. Given the runaway success of iPod sales in the past several years, growth was bound to slow eventually; it was just a matter of when and by how much.

Even as iPod unit-sales growth slows, it's hardly the end of the world for Apple. For one thing, Apple reported that the average selling price of an iPod in the most recent quarter was $181, the highest that number has been in the last year and a half. It's likely that the iPod touch, available for either $299 or $399, is helping to drive that number.

Another sign of the touch's impact can be seen in the growth in revenue of Apple's iPod and music segment—up 147 percent in the fiscal first quarter of 2008 from the previous quarter. That number also compares favorably to the same quarter from last year, in which the segment grew just 120 percent in revenue—another indication that the iPod touch has bolstered the iPod's bottom line.

"Consumers have been very familiar with what Apple has in the iPod line," says Tim Bajarin, president of consulting firm Creative Strategies. "They're waiting for the next level of innovation. There's still a market for the nano and the shuffle, but there could be greater pent-up demand for something like the touch."

Since that's the direction in which Apple clearly intends to push the iPod line, it bodes well for the continued success of the iPod segment.—**DAN MOREN**

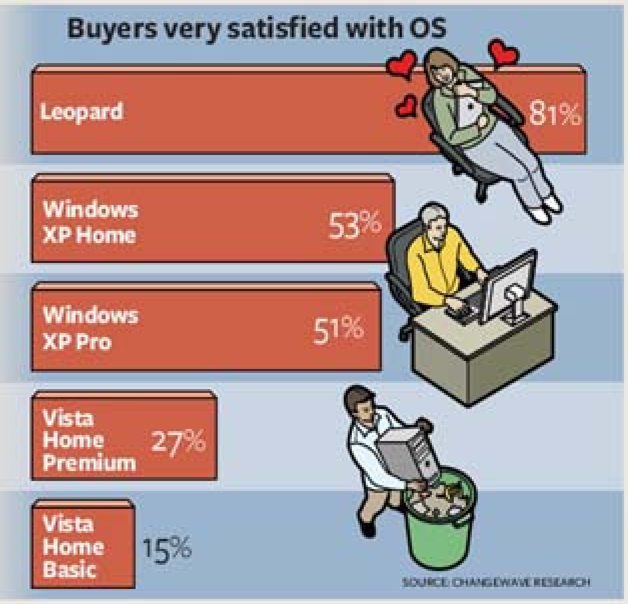
TECH TRENDS

Happy with Leopard

In a January 2008 survey of people who had bought a home computer in the previous 90 days, four-fifths of those who bought Macs said they are "very satisfied" with the Leopard operating system. That's significantly higher than Microsoft's ratings for Windows. In fact, a quarter of recent Mac buyers say that their experience with Leopard is making them more likely to buy a Mac in the future.

—MARYANN JONES THOMPSON

Buyers very satisfied with OS



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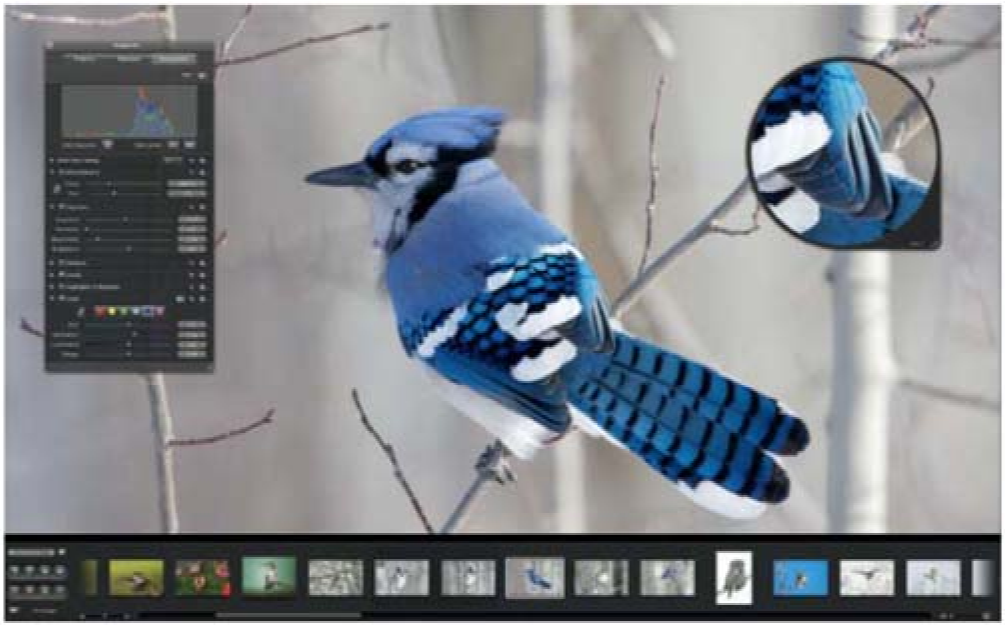
PHOTOGRAPHY

First Look: Aperture 2

Apple photo software gains new tools, gets lower price



With the release of Aperture 2, Apple has reaffirmed its commitment to an important segment of the creative-professional market by rolling out a welcome—and many would say overdue—product that can really benefit pro photographers. Apple has also boosted Aperture's appeal to hobbyists looking to grow beyond iPhoto's limitations.

Most significantly, the company has dramatically overhauled Aperture's engine to offer enhanced performance. That resolves users' biggest complaint—that Aperture was glacially slow, even on the fastest Macs, especially as your catalog of images grew. Where it once took Aperture a dog's age to open on my MacBook Pro, the program now opens lickety-split.

You can now quickly review photos that you're importing from a digital camera while they're still downloading—Aperture 2 reads the JPEG preview embedded in Raw images, rather than opening the Raw image itself. Exporting, another time-consuming activity, happens in the background too, instead of tying up Aperture. Searching for photo metadata is faster, even as the library of images grows larger.

Apple has also overhauled the Raw digital image architecture that Aperture uses to actually manipulate photos from the camera. The result is a host of new image-retouching capabilities that can improve the look of your images in ways not possible prior to this update, all using the same nondestructive workflow that Aperture has supported from day one.

Where it once took Aperture a dog's age to open on my MacBook Pro, the program now opens lickety-split.

In case you're curious, Aperture uses a very clever system of filtering instructions to manage its image manipulation. That's one reason that the software is nondestructive—it doesn't change the bits of the image itself, just the instructions that Aperture uses to display them for you. That's also one reason why creating five or ten versions of the same 10-megapixel image doesn't gobble up dozens of megabytes of additional disk space.

One complaint that Aperture users have voiced for a while is how slow Apple is in updating its Raw digital image file support. When Canon or Nikon releases a new camera, users can wait months before Apple releases an update to its operating system to make those cameras work with Aperture.

When I spoke to Joe Schorr, Apple's product manager for Aperture, he said that one of the reasons this particular update took so long is that Apple has redesigned the Raw pipeline from start to finish. That has enabled some of Aperture's new features (Aperture now supports Raw 2 image profiles), and Schorr said it will give Apple more flexibility to add new support in the future.

In dropping the price by one-third, from $299 to $199 (owners of Aperture 1 can upgrade for $99), Apple has made Aperture a lot more accessible to hobbyist photographers—people who have, say, a Nikon D40x and a few lenses, and find themselves shooting a lot more digital photos than they used to. This makes Aperture a more effective upgrade product for people who find iPhoto too slow or too limited in features (read our review of Aperture at macworld.com/3415).—**PETER COHEN**

PRODUCT WATCH

HARDWARE

Lumix DMC-TZ4 and **Lumix DMC-TZ5**, from Panasonic (www.panasonic.com): 8.1- and 9.1-megapixel point-and-shoot cameras feature 28mm wide-angle 10x optical zoom lenses (DMC-TZ4, $300; DMC-TZ5, $350).

MobileStor Performance, from MCE Technologies (www.mcetech.com): This 320GB hard-drive upgrade for MacBook and MacBook Pro models comes with installation instructions and a toolkit for opening up the laptop ($349).

Optio E50, **M50**, and **S12**, from Pentax Imaging (www.pentaximaging.com): The 8-megapixel Optio E50 has a 3x optical zoom; the 8-megapixel Optio M50 has a 5x optical zoom; and the 12-megapixel Optio S12 has a 3x optical zoom (E50, $150; M50, $230; S12, $280).

TV Switcher, from Gefen (www.gefen.com): This HDTV accessory lets you use one display HDMI port with up to four different HDMI-equipped devices, including video-game consoles, DVD players, and the Apple TV ($199).

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SOFTWARE

User Discovers Office 2008 Problems

Microsoft promises fixes for installation issues

As if a four-year delay between releases wasn't enough, one user has discovered a pair of installation-related problems with Microsoft Office 2008 that pose potential security and administrative headaches. Microsoft has vowed to provide fixes for both. Here are the issues (and see our reviews of the Office programs on page 38).

Issue No. 1: UID 502 The first issue relates to file ownership. Every user account on your Mac has an associated user ID number (UID); Mac OS X uses these UIDs instead of account names to track a user's access to various files and actions. When you initially set up your Mac, the first user account created is given UID 501 and has administrative access. The second account created gets UID 502 and whatever status—admin, standard, or managed—the administrator gives it.

The Office 2008 installation package installs almost all of its files—and their enclosing folders—with the owner set to user ID 502.

If you set up the second account without administrative privileges, it will still end up with free rein over Office's components, and thus the ability to delete or alter Office and many of its support files.

Issue No. 2: Executable Code The second problem is that every file in the Office 2008 installation is executable. If a security vulnerability comes to light in one of Office 2008's more than 42,000 installed files, it will be easier for hackers to exploit that vulnerability because it's in an executable file.

What You Can Do Microsoft says that it will provide a free, downloadable update that fixes both problems. For a longer version of this article, with fixing instructions, go to macworld.com/3359.

—DAN FRAKES AND ROB GRIFFITHS

DIALOG BOX

"This will be the first time since I was 17 that I won't have my full-time Microsoft job."

Bill Gates, during his final Consumer Electronics Show keynote

"The attacks used against [Xserves] are designed for Windows-based machines, so they shrug them off."

Lieutenant Colonel C.J. Wallington, on the Army's addition of Apple hardware in its data centers

"A two-format landscape has led to consumer confusion and indifference."

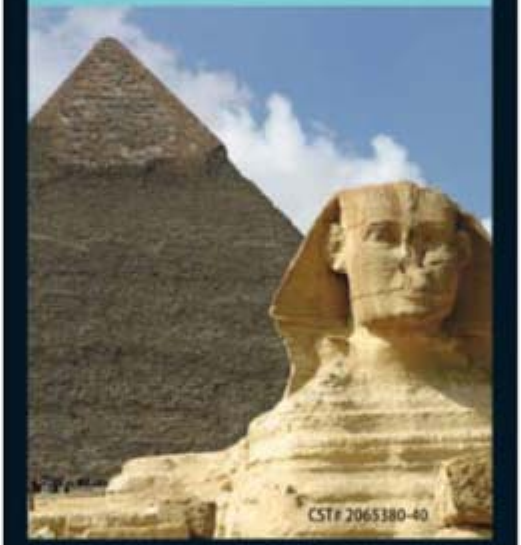
Warner Bros.' Kevin Tsujihara on abandoning HD DVD

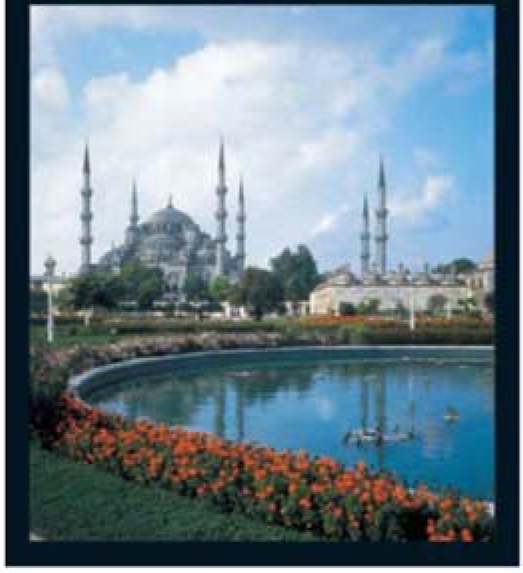
PRODUCT WATCH

SOFTWARE

1Password 2.5.10, from Agile Web Solutions (www.1password.com): This password manager adds a password-strength meter to find weak Web passwords, as well as a new Generic Text Import feature that lets you add information from any formatted text file ($30; upgrade, free).

Jade, from DataMind (jade.datamind.biz): Digital-image-processing software offers one-button automatic image-adjustment and batch-processing features (Jade Home, $40; Jade Pro, $200).





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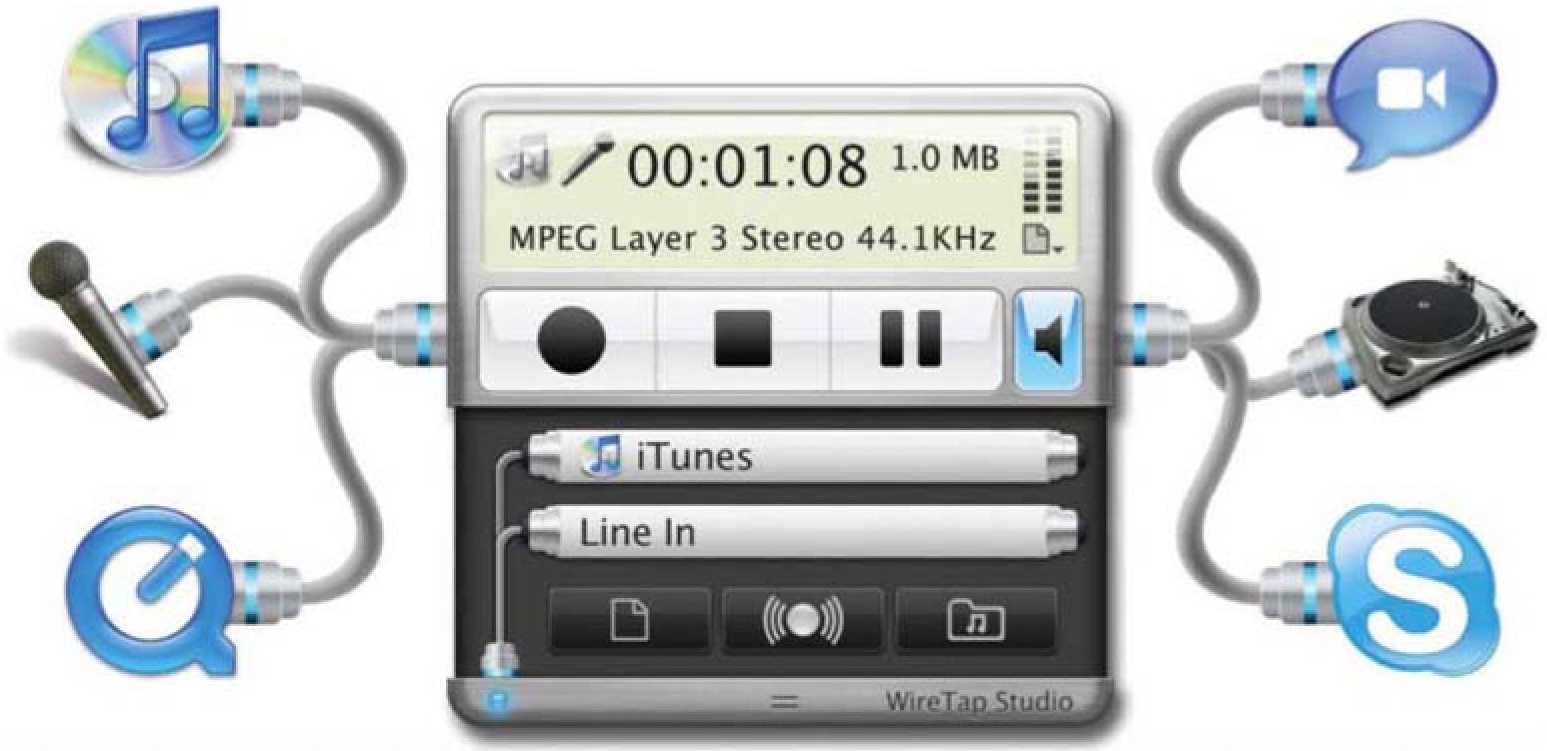

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OPERATING SYSTEM

Vista Home Cleared for Virtualization

Microsoft lifts restriction on entry-level version

People who need to run Windows on their Macs through Parallels Desktop or VMware Fusion got a bit of good news recently—Microsoft has made it less expensive for Mac users to run Windows Vista.

Users who purchase the Home Basic and Home Premium editions of Windows Vista can now legally run those OSes in a virtual environment. Virtualization technologies separate the software on a computer from its underlying hardware, allowing the software to be deployed in more flexible ways. In this case, virtualization can allow multiple operating systems to run on one computer.

The technology has been around for decades but was popularized in server environments recently by VMware and others. The technology became popular on the Mac when Apple switched to Intel processors, letting Macs run Windows at near-native speeds at the same time as OS X.

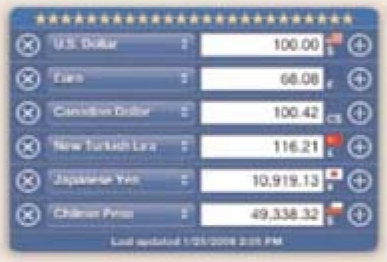
Previously, Microsoft allowed only the $399 Ultimate edition of Vista to be legally run in a virtual machine. This new announcement makes the $199 Home Basic and $239 Home Premium versions fair game. In June 2007, Microsoft appeared to be poised to loosen its licensing restrictions but reversed course and maintained the status quo. (Mac users have been technically able to run Vista Home on a Mac through Parallels Desktop or VMware Fusion, but only in violation of Microsoft's end-user licensing agreement.)

"This move is a good thing for Mac users, since they now have a cost-effective way to access Windows Vista and its massive software library," says Benjamin Rudolph, director of corporate communications for Parallels. "It also makes it even easier for Mac users to keep using OS X, but still integrate with a Windows-centric office. This shows that Microsoft is committed to the virtualization market." Whatever the reason behind it, we're glad Microsoft made the right decision.—JAMES NICCOLAI AND JASON SNELL

WIDGET OF THE MONTH

CurrencyConverter 0.8.2

Apple's Unit Converter widget can convert from one currency to another, but if you deal in multiple currencies, you'll want to check out Paolo Grifantini's CurrencyConverter 0.8.2 (payment requested). This handy widget lets you simultaneously compare as many different currencies as you like (widgets.palple.net).—DAN FRAKES



CREATIVE NOTES

Viveza

If I had to choose the best of show from the 2008 PMA photo conference and trade show in Las Vegas, the top spot would go to Nik Software's Viveza—a new Adobe Photoshop plug-in that performs selective color and tone correction on your images (www.niksoftware.com). The plug-in is based on the U Point technology engineered by Nik and originally employed in Nikon's Capture NX, which is Nikon's image editor for its NEF Raw format.

U Point lets you make edits to portions of an image without having to create complex masks or selections, and it's both extremely powerful and surprisingly simple to use. Viveza also supports Photoshop's smart filters, which let you perform nondestructive editing without having to create adjustment layers. The control point technology is the reason a few friends of mine use Capture NX instead of Photoshop for round-tripping images inside an Aperture workflow. When I was working on reviews of Nikon digital SLR cameras, I was blown away by how easy it was to correct images with Capture NX; and after watching the demo, I can't wait to get my hands on Viveza.

Viveza is in beta right now, and Nik hopes to ship it in April for $250. It will work with both Photoshop and Photoshop Elements 6. Visit the Nik Web site to see a good video introduction that shows how Viveza works its magic.—RICK LEPAGE

PRODUCT WATCH

SOFTWARE

MemoryMiner 1.8, from GroupSmarts (www.memoryminer.com): Digital storytelling program adds a Flickr upload plug-in and Media Browser support for Adobe Photoshop Lightroom libraries ($45; upgrade, free).

ProjectForum 6, from CourseForum Technologies (www.projectforum.com): Collaboration application adds Wiki-oriented visual Web page editor and a sitewide user-account option (free; advanced licenses start at $79).

SuperSync 2.2, from SuperSync (www.supersync.com): Music library synchronization software lets users retrieve songs and playlists from their iPods ($29; upgrade, free).

You Control 1.6, from You Software (www.yousoftware.com): Custom menu software fixes various bugs and adds Leopard compatibility ($30; upgrade, free).

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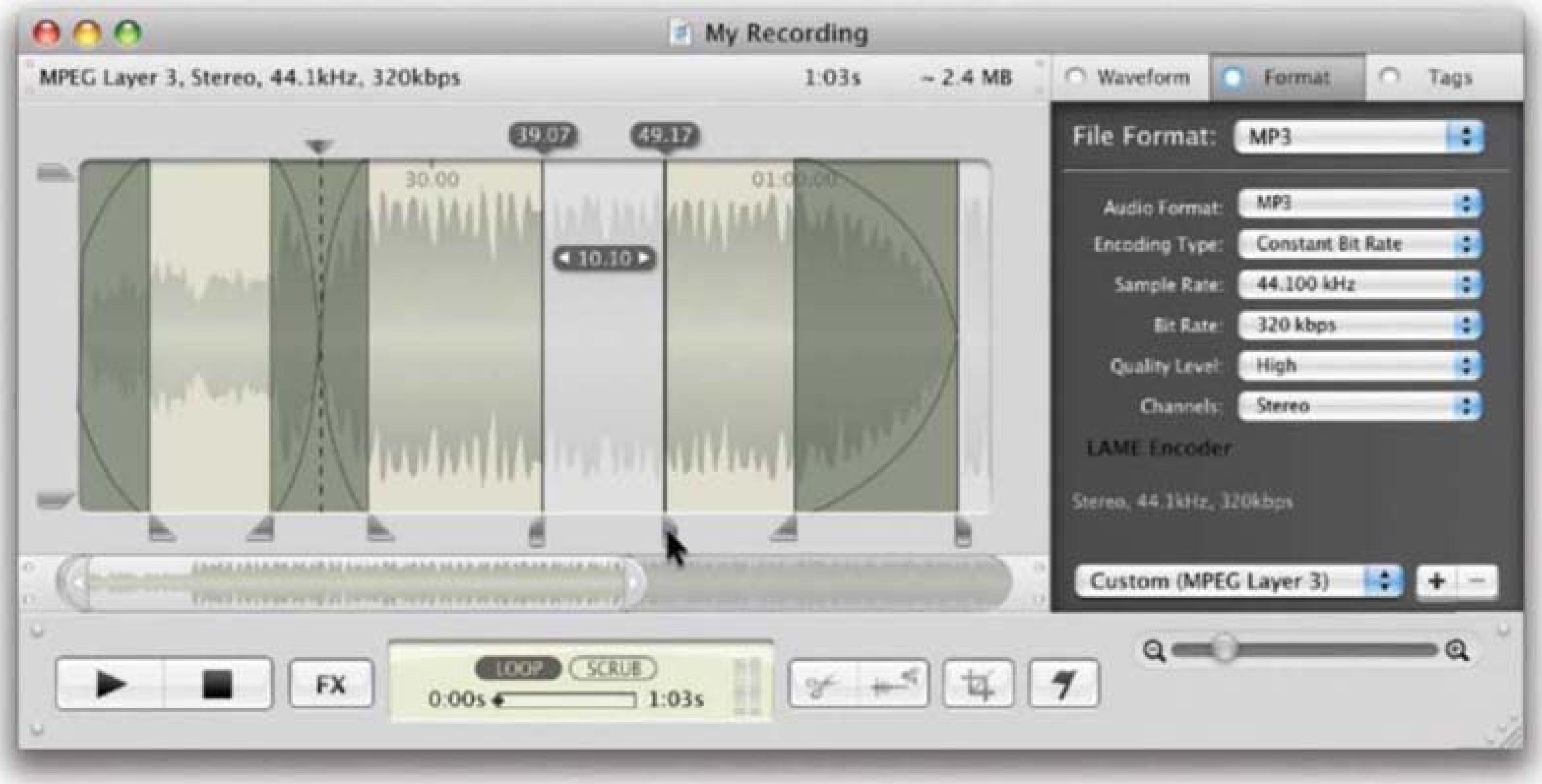

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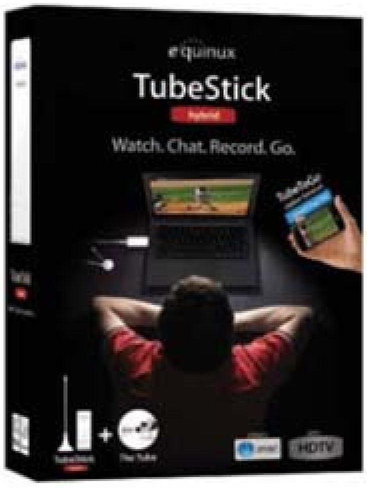
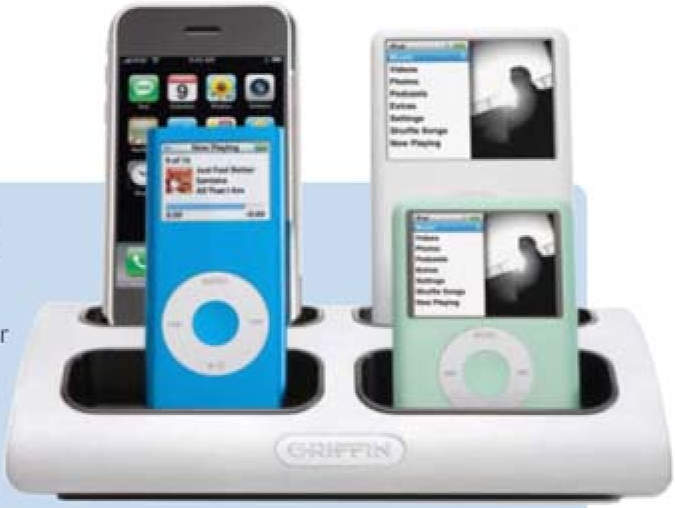
Hot Stuff

What we're raving about this month



TubeStick Hybrid

I never thought I'd see the day when I'd be watching television on my Mac. After all, my computer is for serious stuff—work, sending e-mail, and the like. But as it turns out, I do a fair amount of TV viewing on my Mac, and now the TubeStick hybrid from Equinux promises to make that experience even better. This cute little $129 USB device has two built-in tuners that let you watch both free, over-the-air HD signals and digital and analog cable. And don't forget The Tube, the TubeStick hybrid's companion software package. The Tube lets you do all the usual watching, time shifting, and recording, but it also gives you TubeTalk, a real-time chat room, and BuddySurfing, which lets you follow your friends' channel surfing (www.equinux.com).—**JACKIE DOVE**

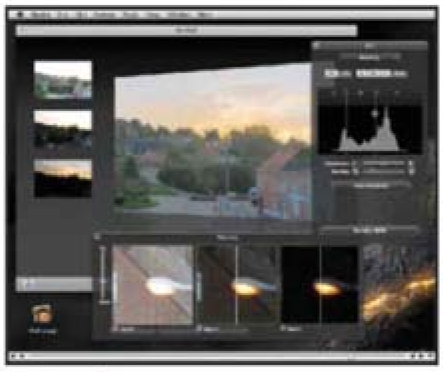


PowerDock

Apple has sold so many iPods and iPhones that it's not uncommon for a family—or even a person—to have more than one. Unless you've got a computer or power adapter for each, your *i* devices have to take turns charging. And if you forget to swap them out, you end up walking out the door with a dead iPod (or worse, a dead iPhone). Inspired by this growing dilemma, Griffin Technology came up with the $70 PowerDock, a sleek, weighted, brushed-aluminum charging station that accommodates any combination of iPhones and iPods in four Universal-style dock cradles. It even includes eight dock adapters, covering most iPod models. Unfortunately, the PowerDock doesn't let you sync your iPods with iTunes, but Griffin says that it's working on a future version that charges *and* syncs (www.griffintechnology.com).—**DAN FRAKES**

Jolt

You're watching a YouTube video, when the screen suddenly dims or switches off completely as OS X's Energy Saver kicks in. Don't you wish your Mac would cut you some slack already? Bryan Hansen's Jolt is a utility that stops Energy Saver from leaping in to play the hero. After you install it, you can activate it with a single click on its menu-bar icon. A free version lets you create a single preset of five minutes, while the $5 paid version is flexible enough to take on five different time presets (www.driftinglight.com).—**AAYUSH ARYA**

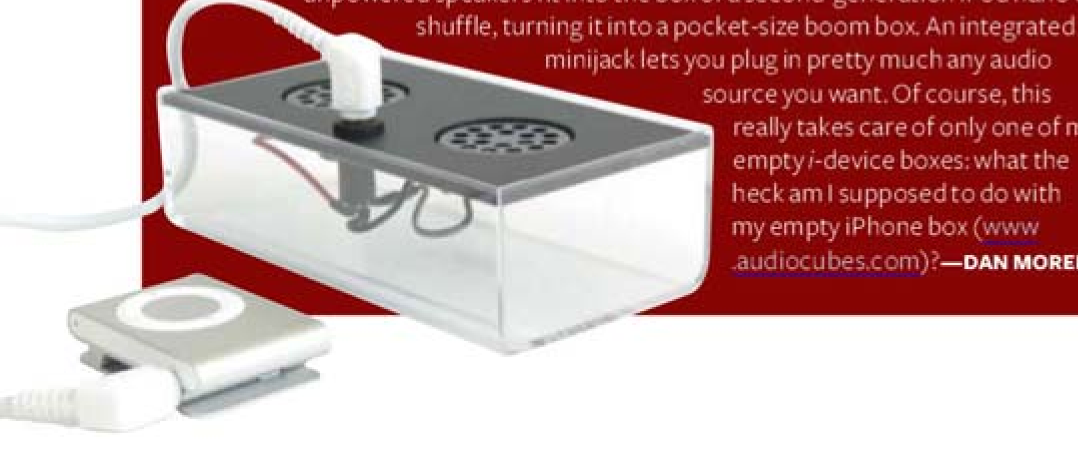


Hydra

While your eyes can distinguish details in both the bright and dark areas of a room, your camera has a far more limited range. To work around this problem, you can take multiple exposures and combine them into a single High Dynamic Range—or HDR—image. Merging multiple exposures to create an HDR image often requires expensive software, a lot of work, and a tripod. Creaceed's $60 Hydra helps you merge multiple exposures, letting you extract the best tones from each photo. What's more, the program does its best to automatically align and blend multiple images, but you also have manual controls for fine-tuning: simply mark points in each photo that should be aligned, and the program will try to morph them to create a seamless composite (creaceed.com).—**KELLY TURNER**

Bird-Electron EZ17-B iPod Recycling Speaker

If you're looking for a way to turn those empty iPod boxes into something useful, consider Audio Cubes' $40 Bird-Electron EZ17-B iPod Recycling Speaker. These unpowered speakers fit into the box of a second-generation iPod nano or shuffle, turning it into a pocket-size boom box. An integrated minijack lets you plug in pretty much any audio source you want. Of course, this really takes care of only one of my empty *i*-device boxes: what the heck am I supposed to do with my empty iPhone box (www.audiocubes.com)?—**DAN MOREN**



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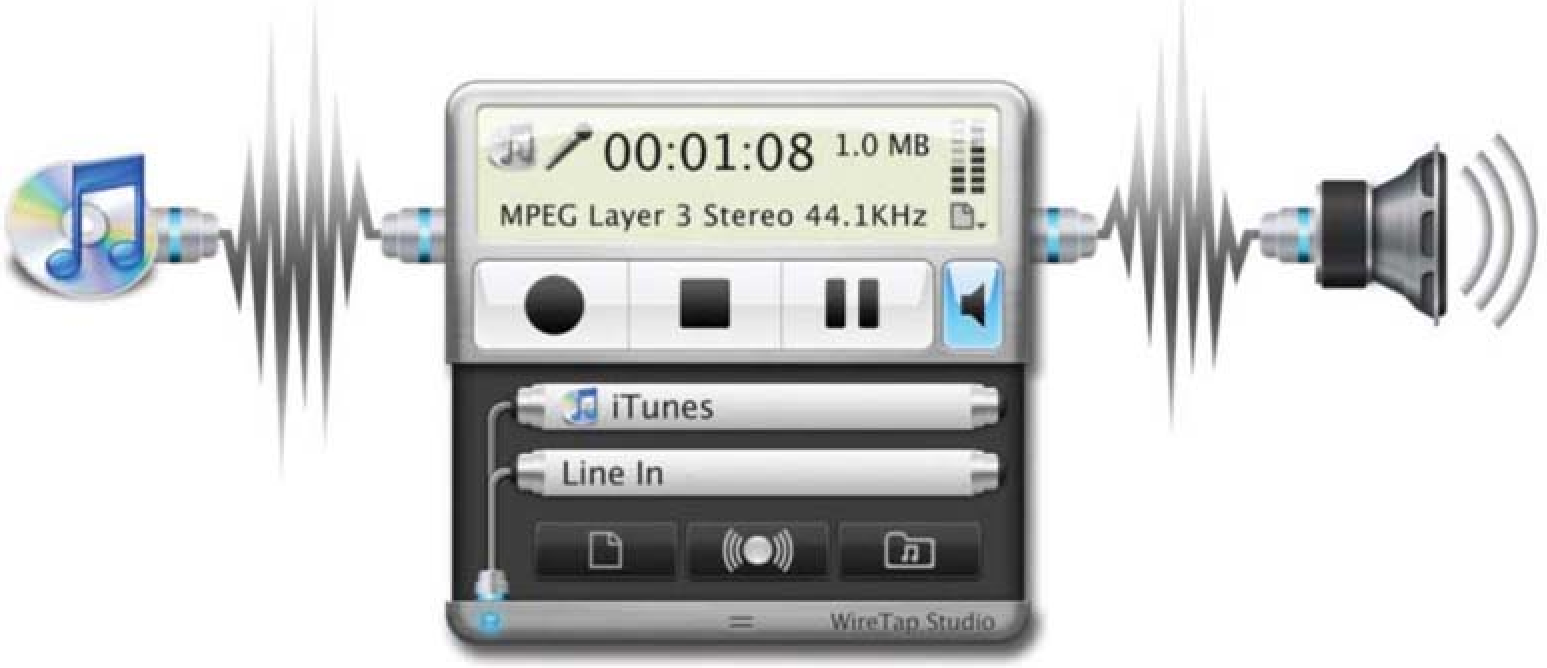

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Macworld 4½

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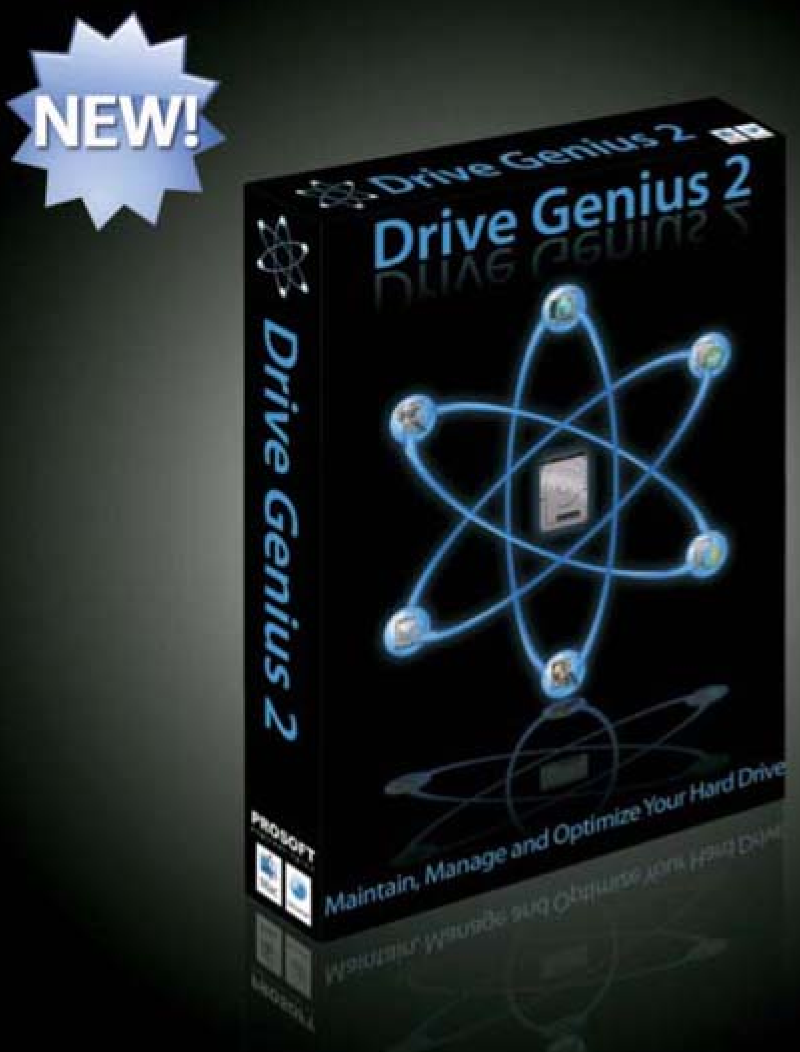
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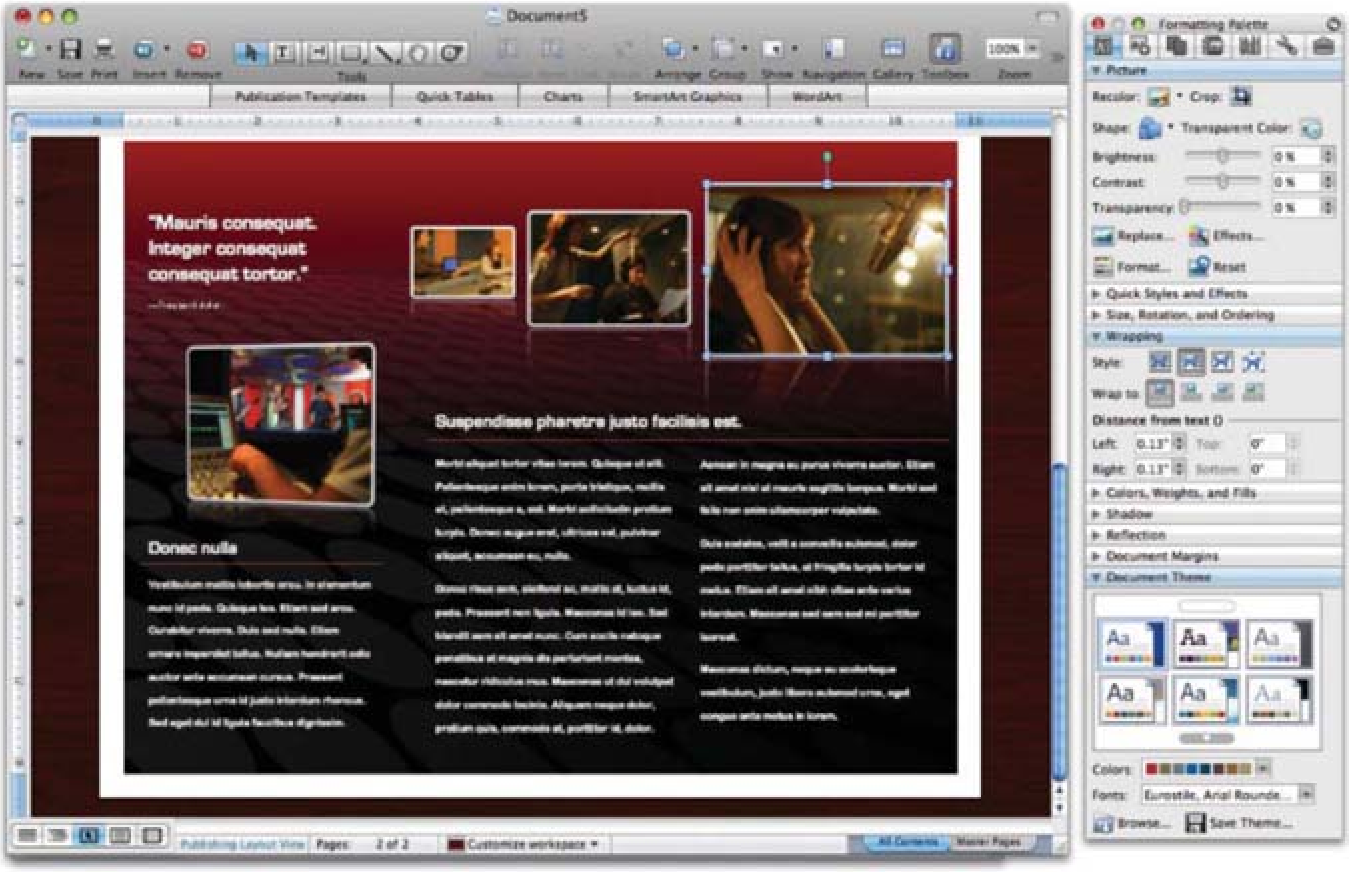
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Publishing Layout Word's new Publishing Layout view gives you greater control over how text and images appear in your documents.

Microsoft Word 2008

Word processor adds new layout mode but loses Visual Basic

BY JEFFERY BATTERSBY

Microsoft Word has been around almost as long as the Mac itself, and it's been four years since the program's last major upgrade. At this late date, how much more can Microsoft do to tweak its venerable word processor? Quite a bit, as it turns out. Word 2008 has a new document format, a simplified toolbar, and a new handy toolbox that combines a bunch of different palettes. But the biggest change is the addition of a new view option called Publishing Layout.

The biggest downside in what would otherwise be an excellent upgrade is the elimination of Visual Basic for Applications (VBA). In its place, Word 2008 offers limited support for AppleScript and Automator, neither of which offers the recording or other features that made it pretty simple to automate and customize Word 2004. If you're accustomed to Word 2004's automation features, you're going to be disappointed with Word 2008.

A Fresh Look

The first and most obvious interface change is the new toolbar. It sits at the top of your document window, rather than being tied to the menu bar. Previously, Word's toolbars could fill up most of the top of your screen, were easy to accidentally rearrange, and contained more buttons than most people used. Word 2008's default toolbar is simpler. It includes just what you need to open, create, and save documents; undo and redo changes; and add tables and columns. If you want to remove or add a button, it's easy to change the toolbar.

Just below Word's toolbar is the Elements Gallery, a set of five new buttons from which you can quickly add tables, charts, SmartArt graphics, WordArt, and more to documents. The Document Elements button, for example, lets you quickly add or modify cover pages, headers and footers, or a table of contents.

Word 2008's new Toolbox combines a bunch of different palettes in one floating palette. From it, you can quickly access formatting options, insertable symbols, clip art, your iPhoto library, reference tools, and Office's Scrapbook and Project Center. In previous versions, those tools were scattered among menus, toolbars, and floating palettes; they're now all in one place.

Still, the Toolbox lacks the simplicity of the floating palettes in Apple's Pages program. For example, depending on what I had selected in my document and which disclosure triangles I had open, the Formatting Palette sometimes outgrew my screen—even when I was working on a 20-inch iMac. It would be nice if Word worked more like Pages, which uses a tabbed format for document options and allows you to open more than one floating palette at a time.

Publishing Tools

It's always been frustrating using Word to create brochures, postcards, posters, or other types of documents that require arranging different elements on a page.

Now Word has a new Publishing Layout view that puts a bunch of tools for manipulating text and graphics at your fingertips. Like Pages, Word 2008 allows you to create template documents with image and text placeholders into which you can drag and drop images and text. You can also link text boxes so text flows from one to another. That said, the image-editing tools in Publishing Layout view aren't as good as those in Pages. Another thing I noticed was that the longer I worked in Publishing Layout mode, the slower Word seemed to get.

Microsoft Word 2008's enhanced publishing tools are an enormous plus.

Bye-bye, VBA

Word 2008 allows you to save documents in the older .doc format, but the program has adopted the new XML-based .docx format as the default for documents. That format makes Word 2008 compatible with the latest version of Word for Windows. Unfortunately, you can't open .docx documents in older versions of Word without the downloadable .docx converter from Microsoft.

More significantly, Office 2008 marks the demise of VBA. In its stead, Word includes an AppleScript library. Unfortunately, Word's AppleScript library isn't nearly as complete as the VBA library was. While there are 30 Automator actions for Word, they aren't that useful. Neither AppleScript nor Automator will let you record a string of events in Word and save them as a reusable script.

Should I Upgrade?

The question for most Mac users isn't "Should I buy Word 2008?" It's "Should I upgrade?"

Overall, as a word processor, Word 2008 is no better or worse than Word 2004. With either, you can create and format documents, print them, and get them out the door. The difference is in the interface: Word 2008's is cleaner; thanks to some great design decisions at Microsoft, there's virtually no learning curve. Yes, it's a pain that you can't hide the Elements Gallery, but it never got in my way, and it definitely put some previously hard-to-find features at my fingertips.

Word's enhanced publishing tools are an enormous plus. Windows users have had the Publisher application for eons; the addition of the Publishing Layout view in the Mac version levels the playing field. That said, you can get better page-layout tools for less money (without losing Office file compatibility) from Pages.

Word 2008

●●●½

PROS: Streamlined interface; new Publishing Layout view; easy-to-use Elements Gallery.

CONS: No Visual Basic support; limited support for AppleScript and Automator; Formatting Palette may outgrow even large screens.

OS X COMPATIBILITY: 10.4 (Tiger), 10.5 (Leopard)

PROCESSOR COMPATIBILITY: Universal

PRICE: stand-alone version, $230; stand-alone upgrade, $110; $400 as part of Office 2008; suite upgrade, $240; Home and Student Edition, $150; Special Media Edition (includes Expression Media), $500; Special Media Edition upgrade, $300

COMPANY: Microsoft, www.microsoft.com

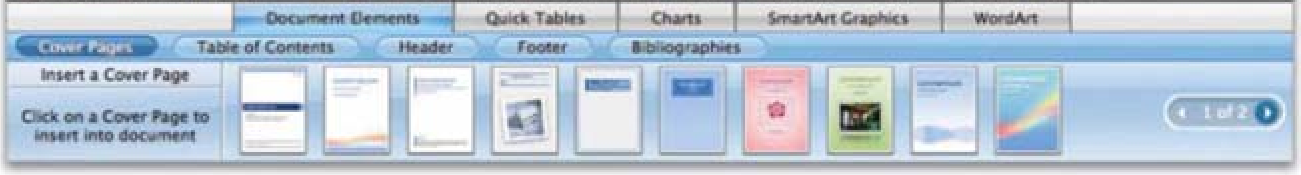
FULL REVIEW: macworld.com/3345

The loss of VBA is a travesty for those of you who use Word in a cross-platform environment, with both Macs and Windows machines, or who rely on a lot of macros. The Automator scripts that come with Word 2008 are not particularly valuable, and AppleScript isn't easy to use. If you need automation, Word 2008 is not for you.

Macworld's Buying Advice

In terms of word processing, little has changed in Microsoft Word between updates. The elimination of VBA and weak support for AppleScript and Automator make Word 2008 far less versatile and valuable for users who really need automation. But the program's streamlined interface and the new Publishing Layout view make this version a compelling choice, especially if you want Word to do more than just process words. ☒

Jeffery Battersby is a network manager who lives in upstate New York. You can read his blog at jeffbattersby.com.



Elements Gallery You can't get rid of the toolbar that now appears at the top of every document, but it does give you quick access to all kinds of graphics and other document options.

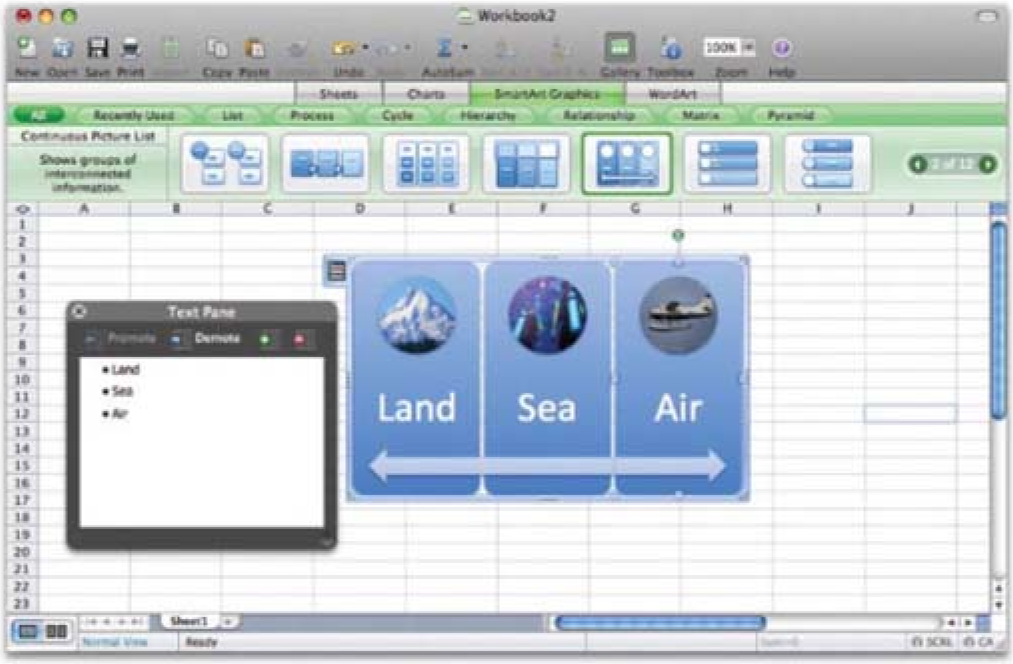
Excel 2008

Spreadsheet program gains minor additions but eliminates macro support

BY ROB GRIFFITHS

It's been more than three years since the last update to Excel (●●●●; macworld.com/3409). Even after all this time, you'll see what appears to be only a slightly re-skinned version of Excel 2004 when you launch the 2008 version. The menus and menu items are nearly identical, and the worksheet itself is the same as it has always been.

Appearances can be deceiving, however—Excel 2008 is a major rewrite, designed to run natively on Intel and PowerPC Macs. This release also offers some new features, though it drops at least one major area of functionality. As a result, Excel 2008 may leave you feeling somewhat underwhelmed.



Excel's Elements Gallery The new Elements Gallery gives you access to a number of ready-to-use templates. Here's one that has had three custom images applied and the stock text replaced.

New Features

Most users will first notice the Elements Gallery, which is represented by a row of four buttons—Sheets, Charts, SmartArt Graphics, and WordArt—and appears below the toolbar. Each button is a shortcut to commonly used features.

Whether you find the Gallery useful will depend on how you use Excel. Personally, I have no use for the Sheets or WordArt buttons, but both Charts and SmartArt Graphics make it easy to add professional-looking images to your spreadsheets. Unfortunately, there's no way to disable any of these Elements Gallery buttons, so even if you never use them, they'll take up some vertical space on every worksheet you open.

Another new feature—the Formula Builder—displays input boxes and brief descriptions for each element in a formula. As you enter values, the boxes become color-coded to match the relevant worksheet cells that you use in the formula—so it's easy to see exactly what goes where.

Formula AutoComplete further speeds the entry of formulas. As you start typing a formula name, Formula AutoComplete displays a pop-up menu with matching formulas. Select one of the displayed formulas, and Excel 2008 will complete the formula's name and then display a floating tooltip showing each required element in that formula.

In Excel 2008, the Formatting Palette is merged with the Toolbox, which is now tabbed and looks more like an Inspector pane in one of Apple's iWork applications. A new Reference Tools tab in the Toolbox gives you fast access to a thesaurus and dictionary (though these aren't the ones built into OS X), an encyclopedia, and a Web search box.

The new toolbar icons are easier to read than those in Excel 2004, and the section headers in the Toolbox are colored, making them easier to spot at a glance. A Document Theme feature in the Formatting Palette picks a set of compatible colors for your worksheet—but the choice affects only SmartArt graphics, charts, shapes, and pictures. Finally, support for graphics and images is better all around in Excel 2008, with improved transparency and shadow effects.

As mentioned earlier, this is the first version of Excel that runs natively on both PowerPC and Intel Macs. In comparing the performance of Excel 2004 and 2008 on an Intel machine, I found that Excel 2008 launches notably faster—on both initial and subsequent launches. But my tests found almost no measurable performance differences between versions in recalculating a complex worksheet or moving around and selecting cells within a large worksheet.

Macros and AppleScript

Excel 2008 doesn't support Visual Basic for Applications (VBA), which is the lan-

Excel 2008

●●●

PROS: Elements Gallery can save time; easy-to-use Formula Builder; better graphics and image handling.

CONS: No Visual Basic support; no support for OS X Services; lingering bugs from previous version.

OS X COMPATIBILITY: 10.4 (Tiger), 10.5 (Leopard)

PROCESSOR COMPATIBILITY: Universal

PRICE: stand-alone version, $230; stand-alone upgrade, $110; $400 as part of Office 2008; suite upgrade, $240; Home and Student Edition, $150; Special Media Edition (includes Expression Media), $500; Special Media Edition upgrade, $300

COMPANY: Microsoft, www.microsoft.com

FULL REVIEW: macworld.com/3347

guage the program used to create and record macros in prior versions of Excel. If you open a macro-enabled worksheet, you can either open and remove the macros or open and leave the macros in place, though they won't run.

This is the major failing in Excel 2008, and the primary reason that many users—myself included—won't be upgrading. Anyone with a collection of macro-enabled spreadsheets will be forced to replace those macros with AppleScript (where possible) or learn to do without them. Users in cross-platform environments will be affected as well, because the Windows-only Office 2007 includes VBA, so they may receive worksheets that don't function on the Mac as they do on Windows machines.

As a replacement, Microsoft suggests using AppleScript and Automator—and Excel 2008 does include a large AppleScript dictionary. However, this version can't record AppleScripts, as Excel 2004 could do with macros, so you'll have to write everything from scratch.

To ease this macro-to-AppleScript transition, Microsoft includes a handful of Automator workflows that you can activate from a new Scripts menu within Excel. These workflows allow you to do things such as use Entourage to mail the current worksheet as a PDF or HTML document; send selected text to Word or PowerPoint; and save the current file in an older Excel file format. When we originally tested Excel, we noted that it had some problems running Automator workflows from the Scripts menu in OS X 10.5, though these workflows ran as expected in OS X 10.4. However, we found that after upgrading to OS X 10.5.2, we no longer experienced any problems in running Automator workflows from the Scripts menu.

Missing Features and Other Foibles

Excel 2004 didn't support Services, a standard OS X feature that, in addition to other things, lets you select snippets of text and send them to other applications. And after three-plus years in development, Excel 2008 doesn't support Services either.

Excel 2008 also wastes a lot of vertical screen real estate. As already noted, you'll have to give up a row for the Elements Gallery, and the Standard toolbar takes up vertical space. The Standard toolbar isn't free-floating, as it was in Excel 2004, but is anchored *within* the spreadsheet window—and it cannot be undocked. So the Standard toolbar appears in every worksheet, instead of appearing just once. (You can disable the toolbar entirely, though that will force you to use menus and keyboard shortcuts instead.)

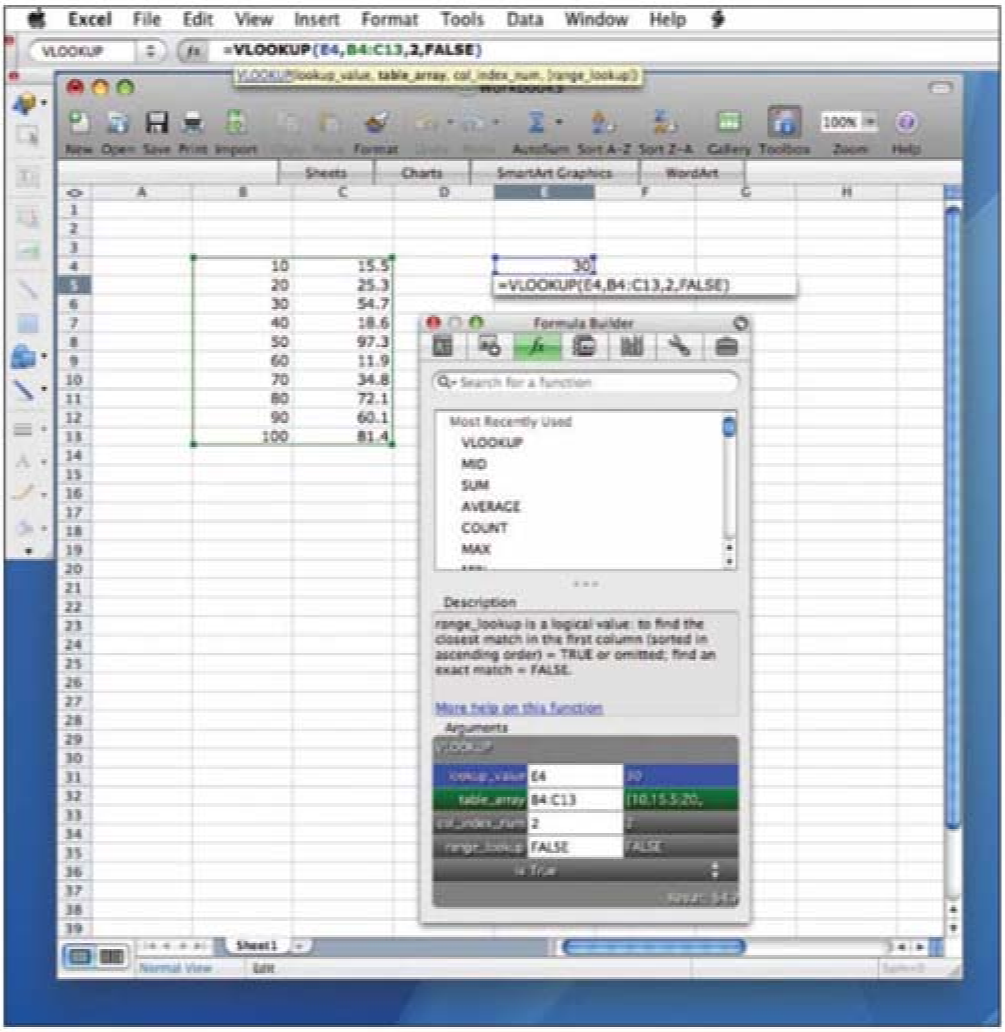
Anyone with a collection of macro-enabled spreadsheets will be forced to replace those macros with AppleScript.

Finally, some bugs that existed in Excel 2004 remain in the new version. For instance, if you have a file located on a lengthy path (more than 200 characters), you cannot open it in Excel 2008, just as you couldn't open it in Excel 2004. (You must move it to a location with a shorter path first.)

Macworld's Buying Advice

If you're happy with Excel 2004's features and performance, you needn't jump to Excel 2008 right away. But if you need Intel-native code on your Mac or feel that Excel 2004 runs too slowly on your Intel Mac, you should upgrade. If you receive files in the new .xlsx format, you'll have to upgrade as well—no file-format converters exist for Excel 2004, as they do for Word and PowerPoint. (Panergy's $20 docXConverter [macworld.com/3351] can translate .xlsx files for Excel 2004.) And if you rely on macros, you really can't upgrade unless you are also an AppleScript wizard and are willing to recode all your macros.

Senior Editor **Rob Griffiths** runs the MacOSXHints.com Web site.



=VLOOKUP(E4,B4:C13,2,FALSE)

VLOOKUP(lookup_value, table_array, col_index_num, [range_lookup])

	B	C
4	10	15.5
5	20	25.3
6	30	54.7
7	40	18.6
8	50	97.3
9	60	11.9
10	70	34.8
11	80	72.1
12	90	60.1
13	100	81.4

E4: 30

range_lookup is a logical value: to find the closest match in the first column (sorted in ascending order) = TRUE or omitted; find an exact match = FALSE.

VLOOKUP		
lookup_value	E4	30
table_array	B4:C13	{10,15.5;20,
col_index_num	2	2
range_lookup	FALSE	FALSE

Formula Builder The new Formula Builder makes it easy to create even the most obscure formulas. Using the descriptions provided for each input box, just point and click to build the formula you need.

PowerPoint 2008

Presentation software edges closer to the competition

BY FRANKLIN N. TESSLER

Few products enjoy the market dominance that PowerPoint does. But Mac presenters have had an alternative since January of 2003, when Apple unveiled Keynote (★★★★½; macworld.com/3043). Sporting an improved interface and beefed-up graphics capabilities, PowerPoint 2008 catches up to Keynote in a few areas, and even exceeds it in some.

PowerPoint's New Look

The Standard toolbar is now fixed in position, but you can opt to display all the other toolbars docked or undocked—except the Drawing toolbar, which cannot be docked. When docked, the toolbars are integrated into the main window, resulting in a much cleaner appearance than in PowerPoint 2004. You can also customize any of the toolbars.

In PowerPoint 2008, the dedicated Slides and Outline views are gone, replaced by a three-part Normal view that shows the current slide on a light gray backdrop and speaker's notes on the bottom. A new pane on the left replaces the old Outline view with one that lets you toggle between outline and thumbnail representations of the presentation. Like Keynote's Navigator, the Slides pane makes it easy to see the current slide in the context of the ones around it, and you can duplicate, delete, or rearrange selected slides. However, there's no way to arrange the slides hierarchically or to hide subgroups of slides, the way you can with Keynote.

The new Elements Gallery nicely augments PowerPoint. Gallery tabs let you insert or make changes to slide themes and layouts, transitions, table styles, charts, SmartArt graphics, and WordArt. The Slide Layouts gallery is especially helpful, since you can use it to either change the layout of an existing slide or add a new slide with the selected layout.

Your Master's Slides

Nowhere is the difference in design philosophy between PowerPoint and Keynote more apparent than in each program's implementation of themes, master slides, and layouts. Instead of maintaining separate title and slide masters, PowerPoint 2008 supports a single master slide that determines the appearance of background elements and placeholders on all the slide layouts. Themes, on the other hand, let you specify the background and attributes of all the placeholders on any subset of slides, and provide a way to maintain design consistency.

PowerPoint 2008

★★★★

PROS: Improved toolbars; more functions centralized in the Toolbox; enhanced graphics capabilities.

CONS: No path animations; confusing master and layout scheme; no QuickTime movie scrubbing; clunky implementation of guides.

OS X COMPATIBILITY: 10.4 (Tiger), 10.5 (Leopard)

PROCESSOR COMPATIBILITY: Universal

PRICE: stand-alone version, $230; stand-alone upgrade, $110; $400 as part of Office 2008; suite upgrade, $240; Home and Student Edition, $150; Special Media Edition (includes Expression Media), $500; Special Media Edition, upgrade $300

COMPANY: Microsoft, www.microsoft.com

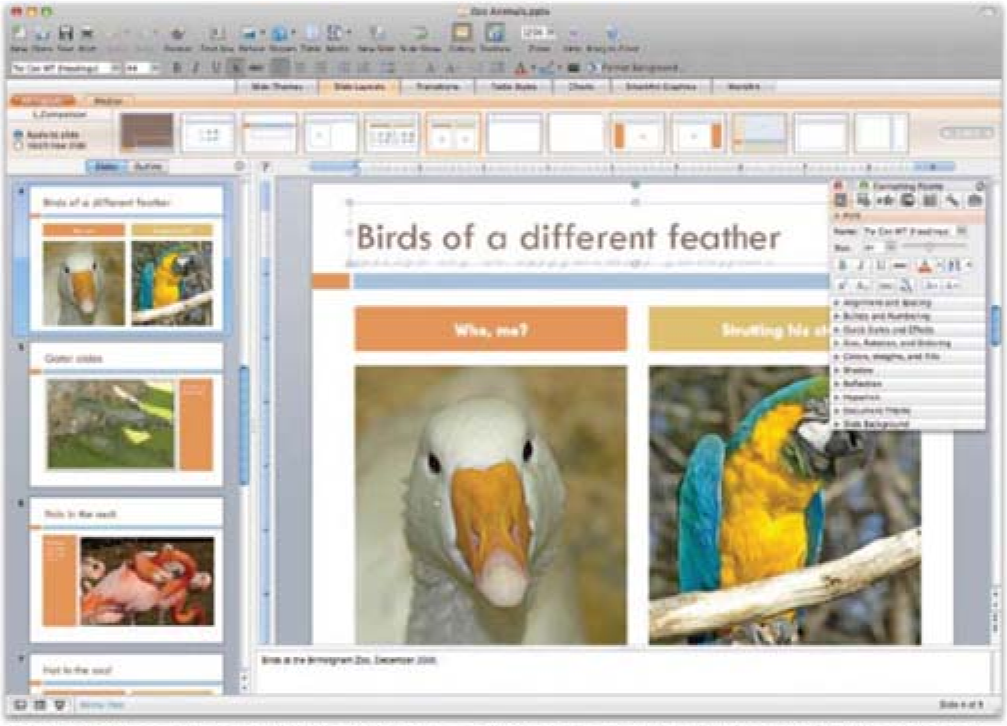
FULL REVIEW: macworld.com/3348

Keynote, by contrast, doesn't separate masters and layouts. Although PowerPoint 2008's model provides considerable flexibility, it's not as straightforward as Keynote's approach, and it will probably confuse novices and experienced users alike.

A Better Toolbox

PowerPoint 2004's Formatting Palette simplified PowerPoint's interface by consolidating many commands in one accessible location. In PowerPoint 2008, the revamped Toolbox continues along the same path by further centralizing functions and grouping them more logically. In addition to the Formatting Palette, which has sections that change to let you adjust the attributes of the currently selected object, the Toolbox sports a separate Object palette that lets you add shapes, symbols, clip art, or pictures to a slide.

PowerPoint 2008's clip art library includes the cheesy drawings that are a



Easy Resizing Thumbnails in the Slides pane get bigger or smaller as you drag the divider. Selected slides are outlined in light blue.

staple of bad presentations everywhere, but thankfully adds more than 100 photographs with transparent backgrounds. Animation controls get their own Toolbox palette, as do Reference Tools, which let you look up dictionary definitions, thesaurus entries, translations, and more. The remaining palettes let you access PowerPoint's Scrapbook and Compatibility Report, which were housed separately in PowerPoint 2004's Toolbox.

But Microsoft's attempt to pack so many different commands into a relatively compact window results in an ever-changing interface, and the dynamic resizing that occurs as you switch between tabs is sometimes jarring.

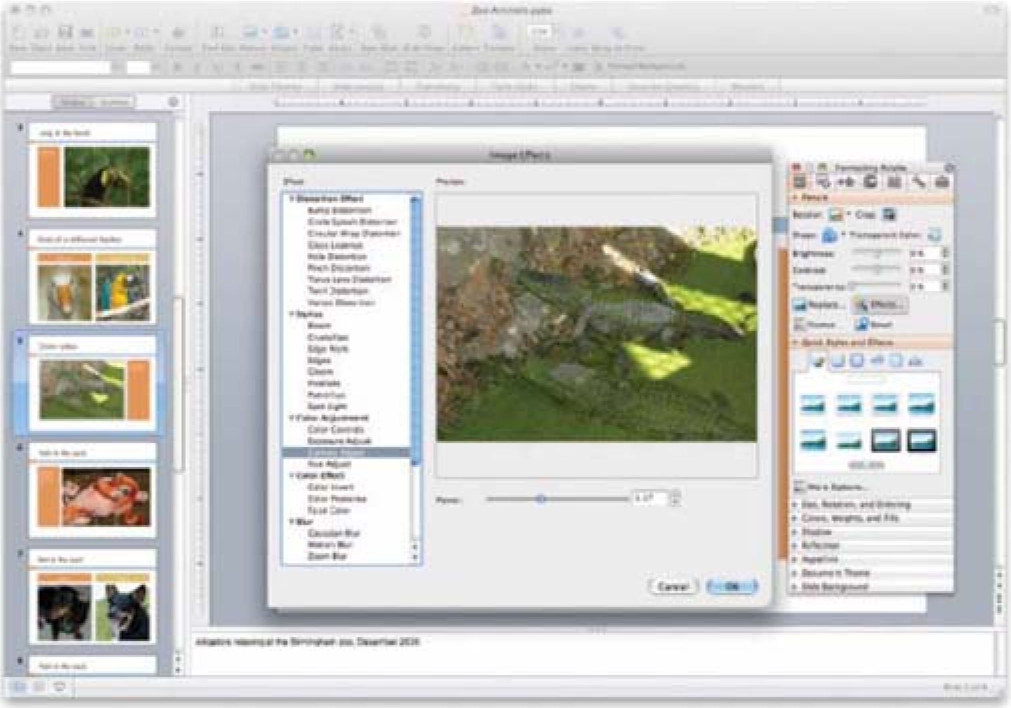


Image Editing PowerPoint's Image Effects can't replace Photoshop, but they're adequate for quick-and-dirty image adjustments.

The Keynote Look

It's always been easy to spot Keynote slide shows—even if they don't use Apple themes, presentations crafted with Keynote often have a distinctive look. PowerPoint 2008 blurs the distinction by adopting more of the graphics capabilities built into OS X. In addition to adjustable soft drop shadows and object transparency, first introduced in Office 2004, PowerPoint 2008 supports reflections. Unlike the reflection feature in Keynote, which works only with images, this one lets you reflect any picture, shape, or text object onto whatever lies behind it on the slide.

PowerPoint also sports a greatly expanded repertoire of picture formatting options and special effects that go beyond Keynote's image adjustments. The roster of 34 effects range from artistic (such as stained glass and bump distortion) to practical (unsharp mask and gamma correction). Although it's helpful to adjust images without having to launch an image editor, doing so can significantly increase the size of the presentation file, as is also true in Keynote.

The Slide Layouts gallery is helpful for changing a slide's layout or adding a slide.

Missed Opportunities and Glitches

Noteworthy additions to Keynote '08 included Smart Builds, which lets you display a series of images using one of ten animation effects, and path motion, which lets you move slide objects from one point to another along defined paths. Alas, similar features are absent from PowerPoint 2008. The program's lack of support for path animation is particularly disappointing, since this feature has been available in the last two versions of PowerPoint for Windows.

Some PowerPoint 2008 omissions are especially odd: for example, you can interact with QuickTime VR movies in a slide show (something that Keynote still doesn't let you do), but you can't pause and then scrub back and forth through a movie during a presentation the way you can with Keynote. Unfortunately, that limits PowerPoint's suitability for some educational applications.

As if to prove that they're not above borrowing a good idea when they see one, Microsoft's programmers have implemented a few tricks from Keynote's playbook. For example, in addition to offering fixed guides, PowerPoint now provides Dynamic Guides that pop up as you move objects around, making it easier to center them on the slide or position them in relation to neighboring items. But PowerPoint's guides are finicky, sometimes not appearing when you expect them to, or forcing you to move objects very slowly to make them come into view.

Macworld's Buying Advice

Despite many improvements, PowerPoint 2008 doesn't feel as well thought out as Keynote, a legacy of PowerPoint's long heritage and its close ties to other Office programs. While you can duplicate almost all of Keynote's dazzling effects in PowerPoint, it's still faster to whip up a top-notch slide show in Keynote. But that doesn't mean Keynote is always the best choice, especially if you can't always use a Mac to deliver your presentations. In many corporate, educational, and scientific venues, presenters have no choice but to use PowerPoint. (You can create a slide show in Keynote and export it in PowerPoint format, but many of Keynote's best effects are lost in translation.) When you need to exchange presentations with Windows users, it might make more sense to use PowerPoint.

Franklin N. Tessler is a radiologist who has been writing about presentations for more than 20 years. He lives in Birmingham, Alabama.

Entourage 2008

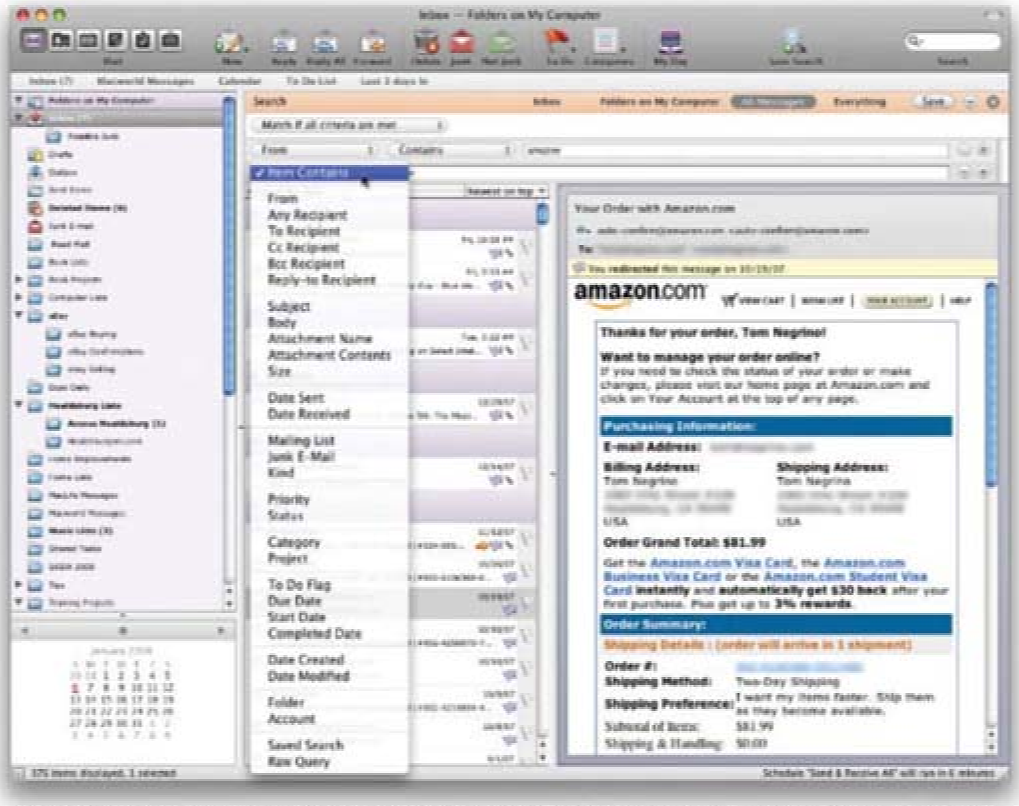
Bests Apple competitor with superior depth of features **BY TOM NEGRINO**

Since the last major version of Microsoft Office, Entourage has probably come under more attack from Apple's applications than any other Office program. OS X's Mail (🐭🐭🐭½; macworld.com/0652), Address Book, and iCal all offer credible alternatives to Entourage's features. So how does Entourage 2008 stand up to Apple's triumvirate? Pretty well, especially for users working in a corporate environment who use a Microsoft Exchange server for their e-mail and calendar needs. For the rest of us—overall—Entourage is still superior to Apple's offerings. But Entourage 2008 offers few exciting new features, leaving the program vulnerable to Apple's next onslaught.

A Welcome Face-lift

Entourage, now Universal, finally looks like a native Mac application and runs more smoothly on Intel Macs. Part of that transition included a revised user interface. The odd, nonstandard toolbar is gone, replaced by a familiar-looking Apple-style toolbar.

Underneath that toolbar, you'll find the new Favorites Bar, which allows you to add shortcuts to items in the Folder List, so you can get to them with a single click.



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Shipping Method: Two-Day Shipping
Shipping Preference: I want my items faster. Ship them as they become available.
Subtotal of Items: $81.99
Shipping & Handling: $0.00

Schedule "Send & Receive All" will run in 6 minutes

Find It Faster Entourage's new reliance on Spotlight for searching speeds up searches dramatically, but the program still retains its wide array of search criteria. The new minimonth under the Folder List allows you to quickly jump to a date in your calendar.

Mail Call

For the most part, Entourage's e-mail features have been refined, not overhauled. You'll still find excellent tools that help you organize your e-mail flood, such as the Mailing List Manager and fine-grained Rules that, in my opinion, ace Mail's similar feature.

Some features have new locations or work differently. For example, there's a Search field in the main toolbar that performs a Spotlight search on your mail, replacing the previous Advanced Find dialog box. You can save searches to the Folder List or the Favorites Bar. Spotlight integration also makes searching through your e-mail much faster than in Entourage 2004.

The junk-mail filter, which in Entourage 2004 became hopelessly out of date and useless, has been updated; when it was set to the High option, I found that it worked well. Microsoft has promised more frequent filter updates to keep up with the spamming arms race. A new antiphishing feature automatically blocks a long list of potentially malevolent file attachments and alerts you to suspicious links in e-mail messages.

Still, Entourage 2008 lacks some of the best new features found in Mail, such as automatic detection of physical addresses and dates, and e-mail stationery templates.

There are several other new or improved features relating to e-mailing or calendaring, but they apply only to users in corporate environments that connect to a Microsoft Exchange server. (Go to macworld.com/3350 for more information.)

Check Your Day

My favorite new calendar feature is the ability to set the minimonth to appear in all parts of the program, even in mail. This is perfect for quick reference when you're working with a mail message—a single click on a date jumps you there in your calendar.

The new My Day companion program gives you a view into your

Entourage 2008

🐭🐭🐭🐭

PROS: Excellent mail and calendar features; faster e-mail searching; improved Exchange support; better database integrity.

CONS: Light on new features; minor bugs; My Day is of limited use; could synchronize better.

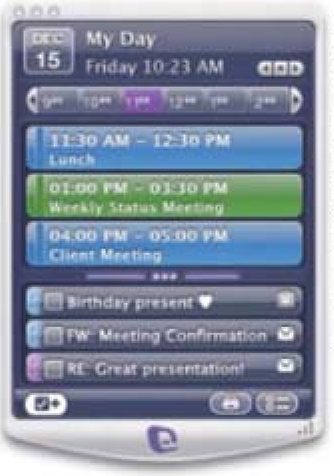
OS X COMPATIBILITY: 10.4 (Tiger), 10.5 (Leopard)

PROCESSOR COMPATIBILITY: Universal

PRICE: $400 as part of Office 2008; suite upgrade, $240; Home and Student Edition, $150; Special Media Edition, $500; Special Media Edition upgrade, $300

COMPANY: Microsoft, www.microsoft.com

FULL REVIEW: macworld.com/3346



Entourage Companion My Day displays your upcoming calendar events and to-do items. A hot key makes My Day appear and disappear.

Entourage data even when the program isn't running, displaying your upcoming calendar events and to-do items, which can include flagged e-mail messages. But My Day limits you to viewing events, creating new tasks, and marking to-dos as complete. You can't create new events with it, and if you need detailed information about an event or want to change it, you must open Entourage anyway.

Other Entourage modules, such as Address Book, Notes, Tasks, and Project Center, remain largely unchanged. It's disappointing that the Project Center hasn't improved; it could use better sharing of projects in a workgroup.

Better Database

Microsoft says that it has done extensive work to make the database more reliable, reducing the need to rebuild it. Over the course of two months, I didn't experience any database problems. I rebuilt the database anyway and noticed an improvement over Entourage 2004: the rebuild no longer loses synchronized data such as e-mail in remote IMAP, Exchange, or Hotmail folders, or the links between items inside Entourage.

Entourage uses a single database file to store its information, and that file can become quite large over time. That spells trouble for Time Machine, OS X 10.5's new backup feature. If you receive even a single e-mail, the whole database is marked as new, and Time Machine will back the entire thing up. If you're short of backup disk space, you might consider excluding `~/Documents/Microsoft User Data/Office 2008 Identities/` from your Time Machine backup, and regularly backing up that directory some other way.

Plays Well with Others (Mostly)

When it comes to supporting typical Mac OS X technologies, Entourage is still ahead of the rest of its Office stablemates. Though all the programs have the useful Services submenu in their application menus, it is active only in Entourage. As a new feature in the regular and Special Media Editions (but not in the lowest-cost Home and Student Edition), Entourage provides eight sample workflows for Automator that let you do things like create a zip archive for a group of messages, or print selected messages. We initially were unable to run Automator workflows from the Scripts menu in OS X 10.5. However, after upgrading to OS X 10.5.2, we no longer had that problem.

Microsoft has done extensive work to make the Entourage database more reliable.

Entourage works reasonably well with OS X's Sync Services, allowing you to synchronize your Entourage contacts with Apple's Address Book, and the Entourage calendar and tasks with iCal. You can also sync these and Entourage's notes with .Mac.

My complaint about Entourage's calendar sharing with iCal is that Entourage assumes that it will be your head calendar honcho. When you first synchronize Entourage with Sync Services, it creates an Entourage calendar in iCal. But there's no way to bring events from other iCal calendars into Entourage's internal calendar. Put another way, Entourage can publish data to iCal but can't subscribe to any of iCal's other calendars. In effect, Entourage uses iCal as a convenient conduit to synchronize its data to other devices, but it doesn't treat iCal as a full calendaring partner.

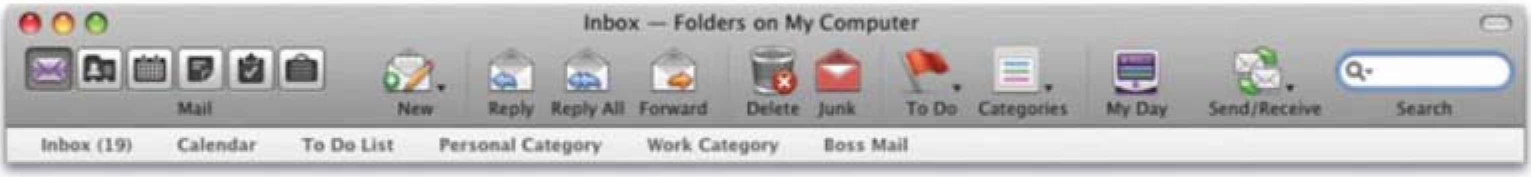
Rough Edges

I discovered a few minor bugs, some of which are in all of the Office 2008 applications, and some of which are particular to Entourage. In Entourage specifically, a couple of times I saw a message window fail to redraw correctly when resized, and some of the mail rules I'd been using in Entourage 2004 didn't work until I opened and resaved them in the new version. Microsoft acknowledged the latter bug and is working on a fix.

Macworld's Buying Advice

The programs that come with Mac OS X, especially in their Leopard incarnations, can easily satisfy people with light e-mail, contact, and scheduling needs. For Microsoft's corporate customers, Entourage 2008 is a better Microsoft Exchange citizen than previous versions, which will help Macs better fit into Windows-centric organizations. Finally, if you're outside of the corporate realm and need a mail, calendar, and contact manager with lots of headroom and solid integration with the rest of the Office suite, Entourage provides a wealth of features that go deeper than Apple's trio. ☒

Longtime *Macworld* contributor **Tom Negrino** has written many books on Microsoft Office for Mac and Windows. His latest is *Microsoft Office PowerPoint 2007 for Windows: Visual QuickStart Guide* (Peachpit Press, 2007).



Standard Toolbar As in most other applications, you can customize the toolbar to show large or small small icons, icons and text, or just text buttons, and you can add and subtract buttons from the toolbar.

macworld.com/reviews

What we're reviewing online this month

SOFTWARE

CSSEdit 2.6 △

RATING: **PRICE:** $30 **COMPANY:** MacRabbit **URL:** www.macrabbit.com

The best Web design programs are pricey packages with difficult learning curves (think Dreamweaver). Cheaper, simpler programs don't give you control over Cascading Style Sheets (CSS) or offer previewing. If you want something in between—if you need precise control over appearance and styles, and if you work with site templates that insert text from a content database—MacRabbit's CSSEdit 2.6 is a great choice. This program bridges the gap between low-end programs like Bare Bones's BBEdit that require you to hand-code CSS and full-blown Web site–development tools such as Dreamweaver (macworld.com/3379).

Eschalon: Book I

RATING: **PRICE:** $28 **COMPANY:** Basilisk Games **URL:** www.basiliskgames.com

Basilisk Games' new single-player role-playing game, Eschalon: Book I, is the first installment of a planned trilogy. It's an old-school RPG, and it's very, very good. This is the latest variation on a venerable genre, in which you explore dungeons and strange lands, interact with computer-controlled non-player characters, and slowly amass skills and abilities, treasure, and special items. If you're a fan of the Wizardry, Ultima, or Might & Magic games of yore, try Eschalon: Book I. With its new graphics and visual effects, easier-to-understand interface, and varied skill classes, it puts a new spin on these tried-and-true classics of the genre (macworld.com/3380).

2.8GHz Eight-Core Mac Pro

RATING: **PRICE:** $2,799 **COMPANY:** Apple **URL:** www.apple.com

Apple's new Mac Pro has been pumped up with faster, more-efficient processors, as well as a speedier system bus and faster memory designed to give the eight cores in those processors lots of data to chew on.

In our Speedmark benchmark testing, the new 2.8GHz eight-core model scored 22 percent higher than the older 2.66GHz Mac Pro. In some of the tests—Cinema 4D and Compressor—the new 2.8GHz did even better, completing those tests about 75 percent faster than the 2.66GHz. In fact, the Mac Pro performed similarly to the previous-generation eight-core 3GHz Mac Pro.

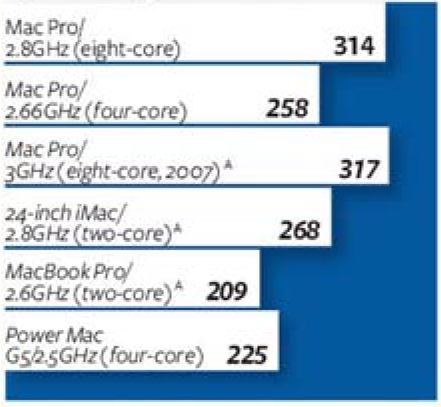
Strangely, even when encoding a DV file in Compressor 3 and running a processor-pounding set of Photoshop CS3 Actions at the same time, the Mac Pro's processors used only about 60 percent of their full power at most. Despite the speedy system bus and faster memory, the poky single 320GB drive and the paltry 2GB of RAM included in the box—coupled with applications that were not engineered to take full advantage of eight cores—prevented the Mac Pro from performing to its peak capability.

Still, if you want the fastest Mac ever, the base-model 2.8GHz eight-core Mac Pro won't disappoint you. If you're a content-creating professional, spend the cash to upgrade your new Mac Pro's processor speed, storage, and RAM, and use applications designed to work with eight cores (macworld.com/3386).

PHOTOGRAPH COURTESY OF APPLE

Macworld Lab Test

Speedmark 5 Test Results



Longer is better. Reference systems are in italics. Speedmark 5 scores are relative to those of a 1.5GHz Core Solo Mac mini, which is assigned a score of 100. All systems were running Mac OS X 10.5.1, with 2GB of RAM. ^A System is a build-to-order model.—MACWORLD LAB TESTING BY BRIAN CHEN, JAMES GALBRAITH, AND JERRY JUNG

For complete benchmark test results, please visit macworld.com/ 3386

mace (mās) –*n.* **1.** A ceremonial staff borne or displayed as the symbol of authority of a legislat body. **2.** A macebearer.

mac·en·light·en·ment (măk-ĕn-līt'n-mənt) –*n.* The action of enlightening your Mac or the state of your Mac being enlightened.: *Bob looked to OWC for macenlightenment since they carried Hitachi drives.*

mac·in·tosh (măk'ĭn-tŏsh') –*n.* A superior form of computer. Fast, hard-working, yet sleek and stylish. easily upgradeable especially from Other Computing with top of the line Hitachi

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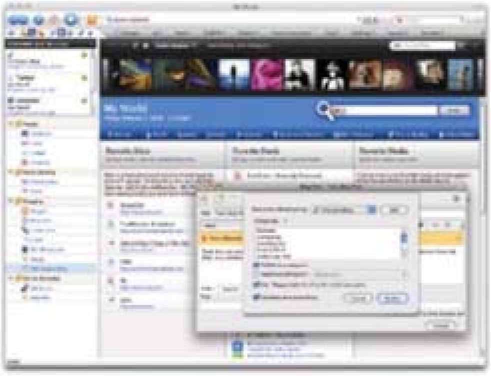


Flock 1.0 △

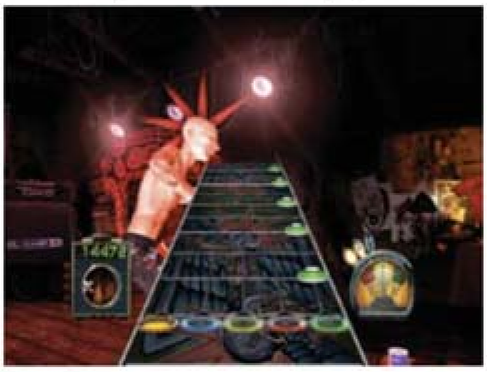
RATING: ★★★★½ **PRICE:** free **COMPANY:** Flock **URL:** www.flock.com

Billed as a "social Web browser," Flock 1.0.3 makes it easy to track blogs and social networks, and to create your own content. You can enter log-in info for Facebook, Flickr, Twitter, YouTube, and common blogging services. That done, you can click on the browser's Blog option to launch a pop-up window preconfigured with your blog's categories and posting options, and then enter text. A panel on the left lets you scan RSS feeds, Facebook updates, Twitter tweets, or Flickr comments (macworld.com/3381).

Guitar Hero III: Legends of Rock

RATING: ★★★★ **PRICE:** $80 **COMPANY:** Aspyr Media **URL:** www.aspyr.com

Guitar Hero has been a phenomenon ever since it appeared on the PlayStation 2 game console in 2005. Here's the deal: You're a guitar player in a rock-and-roll band, looking to hit it big. The ticket to your success is, of course, playing well. Play well enough, and you'll attract talent agents, managers, and endorsement deals from equipment makers, and you'll also be able to play bigger venues. Playing Guitar Hero III doesn't involve actually playing the guitar—instead you match sequences of flashing lights on a special controller that looks like a guitar. The game has its faults—its price and its system requirements are steep. Still, it's a one-of-a-kind game on the Mac, and it's loads of fun (macworld.com/3382).



FIND IT ONLINE For expanded reviews, type the blue URL at the end of each summary into your browser's address bar.

Virtual TimeClock Pro 5.6

RATING: ★★★½ **PRICE:** $195 **COMPANY:** Redcort Software **URL:** www.redcort.com

Virtual TimeClock Pro 5.6.1 does away with the need for a mechanical time clock and punch cards, replacing them with either a computer that acts as a centralized digital time clock or a network-based time clock workers can link to from their own computers over the network or Internet. And since it works on both Macs and Windows systems, Virtual TimeClock Pro is good for people who run a cross-platform business (macworld.com/3383).

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Audioengine 2

RATING: ★★★★ **PRICE:** $199 **COMPANY:** Audioengine **URL:** www.audioengineusa.com

For the money, the Audioengine 2—a smaller version of the company's excellent Audioengine 5 system—is a remarkably good-sounding set of speakers. But the company missed the mark by suggesting that the pair is primarily intended for the desktop (aka *near-field listening*). To make these speakers shine, leave the desktop behind and mount them on the wall behind your desk or place them on a bookshelf. They'll reward you with surprisingly robust sound, from nicely rounded bass to crisp treble. The Audioengine 2 does not match the overall output or bass response of its larger sibling, but it's ideal for an office or bedroom (macworld.com/3384).

HL-4070CDW

RATING: ★★★★½ **PRICE:** $499 **COMPANY:** Brother **URL:** www.brother.com

If you're looking to purchase a printer for a small to medium-size workgroup, the HL-4070CDW is an excellent choice. Brother's color laser packs a profusion of useful features—including wireless networking, duplexing, and PostScript compatibility (via emulation)—while delivering speedy performance, ease of use, and excellent print quality. And at $500, you can't complain about the price. Overall, the HL-4070CDW offers an extremely impressive set of features at a very reasonable cost (macworld.com/3385).

ScanSnap S510M

RATING: ★★★★½ **PRICE:** $495 **COMPANY:** Fujitsu **URL:** scansnap.fujitsu.com

Unlike flatbed scanners, which are designed primarily for scanning images, Fujitsu's ScanSnap S510M has a compact, upright design that's more appropriate for scanning documents. It can churn through stacks of up to 50 sheets of paper at a time, scanning both sides of the page at once. The scanner automatically detects the paper's size and orientation, and whether the document is in color. The ScanSnap's 600-dpi optical resolution is perfect for scanning office documents, and adequate, if not terrific, for photographs. If you want to turn your paper archives into searchable PDFs, it doesn't get any easier than with the Fujitsu ScanSnap S510M (macworld.com/3321).

FIND IT ONLINE See macworld.com/3393 for information about tax-preparation software.

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Top Products

Your guide to the best hardware we've tested. See more at macworld.com/reviews.

PRINTERS

LASER PRINTER

C6100dn

RATING: ★★★★½
PRICE: $799
COMPANY: Oki Data
URL: www.okidata.com

The C6100dn, from Oki Data, produces great-looking prints and includes built-in duplexing. It also offers easy network connectivity and quick printing speeds (macworld.com/1670).

INK-JET PHOTO PRINTER

Stylus Photo 1400

RATING: ★★★★
PRICE: $260
COMPANY: Epson
URL: www.epson.com

Epson's Stylus Photo 1400 prints photos that are rich in both color and detail. Capable of outputting images as large as 13 by 19 inches, this printer is surprisingly affordable, without compromising on quality (macworld.com/2924).

COMPACT PHOTO PRINTER

PictureMate Zoom PM 290

RATING: ★★★★½ **PRICE:** $200
COMPANY: Epson
URL: www.epson.com

Affordable, problem-free, and enjoyable to use, the PictureMate Zoom is the best and speediest portable photo printer currently on the market (macworld.com/3102).

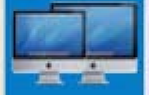
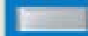
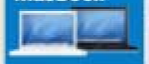
MULTIFUNCTION LASER

X500N

RATING: ★★★★ **PRICE:** $396
COMPANY: Lexmark
URL: www.lexmark.com

Don't let the Lexmark X500N's low price tag fool you. This all-in-one color laser printer, scanner, and copier is an impressive overall performer (macworld.com/3278).

MACS

PRODUCT	PROCESSOR	RATING	PRICE[A]	DISPLAY	SPEEDMARK 5 SCORE[B]	FIND CODE[C]
DESKTOP						
iMac 	Intel Core 2 Duo/2GHz	★★★★	$1,100	20 inches	210	3029
	Intel Core 2 Duo/2.4GHz	★★★★	$1,469	20 inches	245	3028
	Intel Core 2 Duo/2.4GHz	★★★★½	$1,726	24 inches	245	3027
Mac mini 	Intel Core 2 Duo/1.83GHz	★★★★	$594	not included	159	3030
	Intel Core 2 Duo/2GHz	★★★★	$789	not included	172	3031
Mac Pro	Intel Xeon/ two quad-core 2.8GHz	★★★★½	$2,668	not included	314	3363
PORTABLE						
MacBook 	Intel Core 2 Duo/2GHz	★★★★½	$1,020	13 inches	172	3214
	Intel Core 2 Duo/2.2GHz	★★★★½	$1,230	13 inches	185	3215
	Intel Core 2 Duo/ 2.2GHz (black)	★★★★½	$1,398	13 inches	186	3216
MacBook Air	Intel Core 2 Duo/1.6GHz	★★★½	$1,794	13 inches	124	3364
MacBook Pro	Intel Core 2 Duo/2.2GHz	★★★★½	$1,616	15 inches	185	2932
	Intel Core 2 Duo/2.4GHz	★★★★½	$1,825	15 inches	199	2933
	Intel Core 2 Duo/2.4GHz	★★★★½	$2,300	17 inches	204	2934

[A] From a PriceGrabber survey of retailers as of February 13, 2008. [B] Speedmark 5 is Macworld Lab's standard test tool for benchmarking systems running Mac OS X 10.5 (Leopard). For information on Speedmark testing, go to www.macworld.com/speedmark. [C] Typing in find codes after macworld.com/ directs you to a product's review or overview. For example, macworld.com/2489 contains an overview of the 2.66GHz Mac Pro.

FLATBED SCANNER

Perfection V700 Photo

RATING: ★★★★
PRICE: $492
COMPANY: Epson
URL: www.epson.com

The Epson Perfection V700 Photo is an excellent midrange scanner for people who need to scan both reflective media and transparencies, especially at high resolutions (macworld.com/1519).

DIGITAL CAMERAS

DIGITAL SLR

D40

RATING: ★★★★
PRICE: $455
COMPANY: Nikon
URL: www.nikonusa.com

The Nikon D40 is a great value. This 6.1-megapixel camera comes with every feature you'd desire in a DSLR, such as adjustable ISO, Raw mode, and a variety of image-processing features (macworld.com/2498).

Top Products are those we've recently reviewed in a comparison of like products. As new products become available, we'll update this list. For longer reviews of these products and for other product recommendations, go to macworld.com/reviews. All prices are the best current prices taken from a PriceGrabber survey of retailers as of February 13, 2008.

COMPACT DIGITAL CAMERA

NV11

RATING: ●●●●◐
PRICE: $263
COMPANY: Samsung
URL: www.samsung.com

An excellent all-around digital camera, the 10.1-megapixel Samsung NV11 is equally accommodating of beginners and advanced shutterbugs (macworld.com/2984).

MINIDV CAMCORDER

PV-GS320

RATING: ●●●●
PRICE: $338
COMPANY: Panasonic **URL:** www.panasonic.com

Compared with other 3-CCD MiniDV camcorders, the Panasonic PV-GS320 is a bargain. And it's a good choice for people who want a camcorder that shoots high-quality video and still images for half the cost of a high definition device (macworld.com/2701).

LCD MONITORS

LARGE DISPLAY

LP2465

RATING: ●●●●
PRICE: $624
COMPANY: Hewlett-Packard
URL: www.hp.com

The HP LP2465 is an affordable and extremely adjustable 24-inch desktop LCD panel with a 16:10 wide-screen aspect ratio that immediately calls to mind the cinema (macworld.com/2508).

MEDIUM DISPLAY

MultiSync 2190UXi

RATING: ●●●●◐
PRICE: $977
COMPANY: NEC
URL: www.necdisplay.com

The 21-inch NEC MultiSync 2190UXi does not come cheap, but it offers vivid and accurate colors, as well as a wide viewing angle (macworld.com/1445).

DUAL-LAYER DVD BURNER

d2 DVD+/-RW with LightScribe

RATING: ●●●●◐
PRICE: $130
COMPANY: LaCie
URL: www.lacie.com

Speedy and versatile, the LaCie d2 external rewritable drive has the added bonus of being able to burn LightScribe images—a cool disc-labeling technology (macworld.com/2263).

FIREWIRE HARD DRIVES

DESKTOP DRIVE

My Book Studio Edition

RATING: ●●●●◐ **PRICE:** $330
COMPANY: Western Digital
URL: www.westerndigital.com

NEW The My Book Studio Edition's features, design, and fast speed add up to a superb 1TB drive (macworld.com/3295).

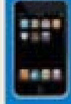
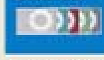
PORTABLE DRIVE

Rocbit 2B

RATING: ●●●●●
PRICE: $192
COMPANY: Rocsecure **URL:** www.rocsecure.com

The portable Rocbit 2B is a fast, quiet hard drive featuring real-time encryption. It's well worth its cost if security is a concern (macworld.com/1443).

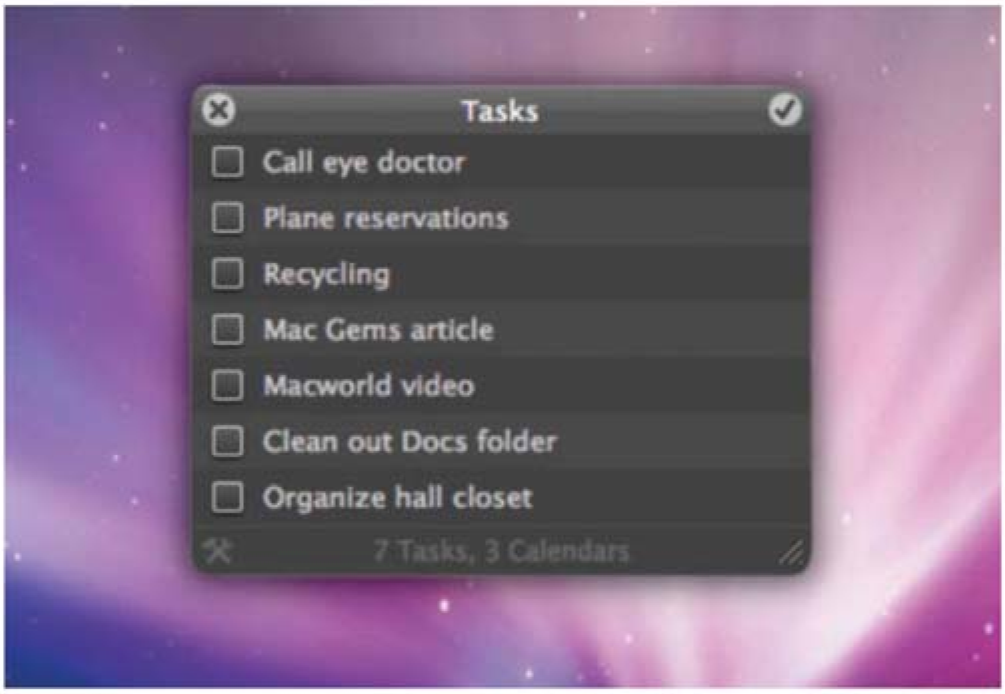
iPODS

PRODUCT	CAPACITY	RATING	PRICE[A]	DISPLAY	BATTERY LIFE	MEDIA SUPPORTED	FIND CODE[B]
iPod classic	80GB	●●●●	$230	2.5-inch color	30 hours of music playback; 5 hours of video playback	Music, photos, album art, video, games	3090
iPod classic	160GB	●●●●	$329	2.5-inch color	40 hours of music playback; 7 hours of video playback	Music, photos, album art, video, games	3091
iPod touch	8GB	●●●◐	$280	3.5-inch color	22 hours of music playback; 5 hours of video playback	Music, photos, album art, video	3092
iPod touch 	16GB	●●●◐	$389	3.5-inch color	22 hours of music playback; 5 hours of video playback	Music, photos, album art, video	3093
iPod touch	32GB	●●●●	$499	3.5-inch color	22 hours of music playback; 5 hours of video playback	Music, photos, album art, video	3365
iPod nano	4GB	●●●●◐	$140	2-inch color	24 hours of music playback; 5 hours of video playback	Music, photos, album art, video, games	3094
iPod nano	8GB	●●●●◐	$180	2-inch color	24 hours of music playback; 5 hours of video playback	Music, photos, album art, video, games	3095
iPod shuffle 	1GB	●●●●	$69	none	12 hours of music playback	Music	2238

[A] From a PriceGrabber survey of retailers as of February 13, 2008. [B] Typing in find codes after macworld.com/ directs you to a product's review or overview. For example, macworld.com/3092 contains an overview of the 8GB iPod touch.

Mac Gems

Get more and expanded reviews at macworld.com/macgems **BY DAN FRAKES**



☐ Call eye doctor
☐ Plane reservations
☐ Recycling
☐ Mac Gems article
☐ Macworld video
☐ Clean out Docs folder
☐ Organize hall closet

Easy-Access To-Do List Anxiety gives you a simple, easy-to-use to-do list that automatically syncs with Apple's iCal and Mail.

PRODUCTIVITY

Anxiety 1.0

RATING: ♦♦♦½ **PRICE:** payment requested **COMPANY:** Model Concept **URL:** www.anxietyapp.com

To-do lists aren't new, but lately, keeping track of tasks has become a hot topic—witness the popularity of the Getting Things Done time- and task-management system. For people who spend their days using a computer, an on-screen to-do program can be a big help. A new offering that caught my eye is Model Concept's ironically named Anxiety 1.0, which stands out because of its simple interface and integration with the to-do functionality in Apple's iCal and Mail.

Anxiety gives you a simple, semitransparent window containing a list of tasks; the window can float over all other windows, or it can fade out when Anxiety isn't the frontmost program. Click on the checkmark button to add a new task; check the box next to a task to mark it as completed and remove it from the list.

Anxiety's list also automatically synchronizes with the to-do lists in Leopard's iCal and Mail programs. When you check off an item in Anxiety, or when you create a new task, the other programs instantly reflect those changes. And if you create a new task in iCal or Mail, it appears in Anxiety's window.

When creating a task in Anxiety, you can choose the iCal calendar to which a new task will be synced. You can even set up a new iCal calendar from within Anxiety when adding a new task. What's more, you can choose whether to view tasks from all iCal calendars at once or just those from a particular calendar.

People accustomed to full-featured to-do programs will find a number of common features missing in Anxiety. For example, you can't see each task's due date or priority, and you can't choose how tasks are sorted (Anxiety sorts by priority, ignoring due dates or custom ordering in Mail or iCal). And most task editing must be done in iCal or Mail. The good news is that the developer plans to include many of these features in a future update.

Still, Anxiety's goal is to be an elegant, no-frills way to keep your to-do list handy, and in that respect the program succeeds.

UTILITY

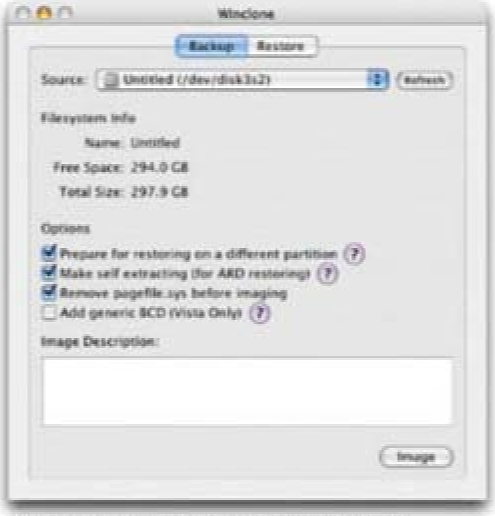
Winclone 1.6.3

RATING: ♦♦♦½ **PRICE:** free **COMPANY:** TwoCanoes Software **URL:** www.twocanoes.com

Many Mac users need to run Windows once in a while, and for some of us, that means using Apple's Boot Camp technology to boot into Windows. One common question I get from Boot Camp users is how to back up a Boot Camp volume. Unfortunately, Mac cloning software, such as SuperDuper (♦♦♦♦♦) and Carbon Copy Cloner (♦♦♦♦½), doesn't work with Windows volumes.

A good Mac-based solution is TwoCanoes Software's Winclone 1.6.3, which lets you make a disk image of a Boot Camp volume; you can later restore that image to the original volume or to a different one.

When you first launch Winclone, it scans mounted volumes for valid Boot



Source: Untitled (/dev/disk3s2)

Filesystem Info
Name: Untitled
Free Space: 294.0 GB
Total Size: 297.9 GB

Options
☑ Prepare for restoring on a different partition
☑ Make self extracting (for ARD restoring)
☑ Remove pagefile.sys before imaging
☐ Add generic BCD (Vista Only)

Image Description:

Boot Camp Copier Winclone helps you clone—essentially back up—your Boot Camp Windows volume.

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Leopard Plug-ins

You can make Leopard's Quick Look work with more types of files by installing third-party plug-ins (a good source is QLPlugins.com). Here's a look at a few favorites.

If you've ever tried to use Quick Look on a folder, you know it shows you only a large folder icon and some very basic information. **Folder Quick Look Plugin .03** (♦♦♦♦; free; XDD, macworld.com/3337) lets Quick Look work its magic on folders by giving you a kind of list-view display of a folder's contents, as well as detailed information about the folder as a whole (the number of top-level items in it, the full path to the folder, and the folder's creation and modification dates) and about each item in the folder (creation and modification dates, size, and kind).

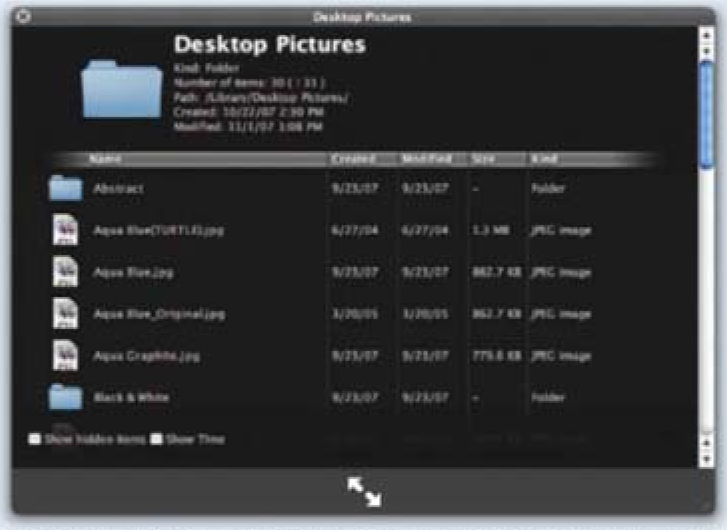
You can choose to also view the creation and modification times for each file, as well as any invisible files contained in the folder.

The **flv Quick Look Plugin 0.1** (♦♦♦; free; XDD, macworld.com/3338), from the same developer, lets you preview Flash media files via Quick Look. (The plug-in requires the Perian add-on for QuickTime, from perian.org.) Clicking on the Play button lets you watch the video, and you can drag the progress nub (or scroll with your mouse or trackpad) to scrub through the video.

One limitation: the flv Quick Look Plugin currently supports only .flv Flash files; Quick Look still won't be able to preview .swf files.

If you've ever wondered what files an Installer package will install, and in what locations, **Suspicious Package 1.0** (♦♦♦; free; Mothers Ruin Software, www.mothersruin.com) can help. After installing the plug-in, you can use Quick Look on an Installer package to get an overview of the package's contents; clicking on the Show Contents button will reveal a hierarchical list of all files to be installed.

By design, Suspicious Package works only on Installer package files; it won't inspect third-party installers. In addition, the current version works only on packages ending in *.pkg*; support for .mpkg packages is in the works. Finally, with some packages, the file listing doesn't show where each file will be installed; you can get more details on these limitations at macworld.com/3339.



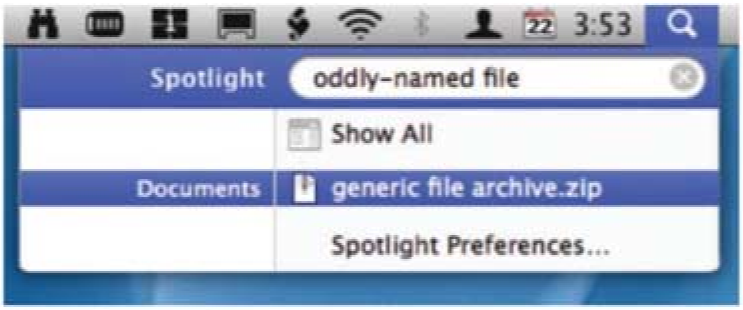
Quick Folder Glance The Folder Quick Look Plugin gives you a quick preview of a folder's actual contents.

Camp partitions. You choose your Windows volume from the Source pop-up menu (note that Winclone works only with volumes formatted as NTFS, a standard Windows file system; it doesn't support FAT32, an older file system). You then choose options for creating the copy; for example, you can specify whether you plan on moving the Boot Camp partition to a different volume, or whether you need the ability to restore the resulting image, using Apple Remote Desktop.

Click on the Image button, choose a location in which to save the resulting disk image, click on Image, and Winclone goes to work; the process is faster than you might expect.

Restoring your Boot Camp image is even easier. Switch to the Restore tab, click on Select Image, navigate to the Winclone image, and then choose the destination volume from the Destination pop-up menu. (A Calculate feature lets you determine if the destination is big enough for the restore.) Click on the Restore button, and soon after—the restoration process is actually faster than the imaging process—you'll have a bootable Windows volume.

Winclone has a few additional features, available from its Tools menu, as well as a few limitations too involved to get into here; see macworld.com/3340 for the details. Overall, Winclone is a great utility for users who want to back up their Windows Boot Camp partition without having to set up another backup system within Windows.



Zip-Archive Searching Ziplight lets Spotlight search inside zip archives.

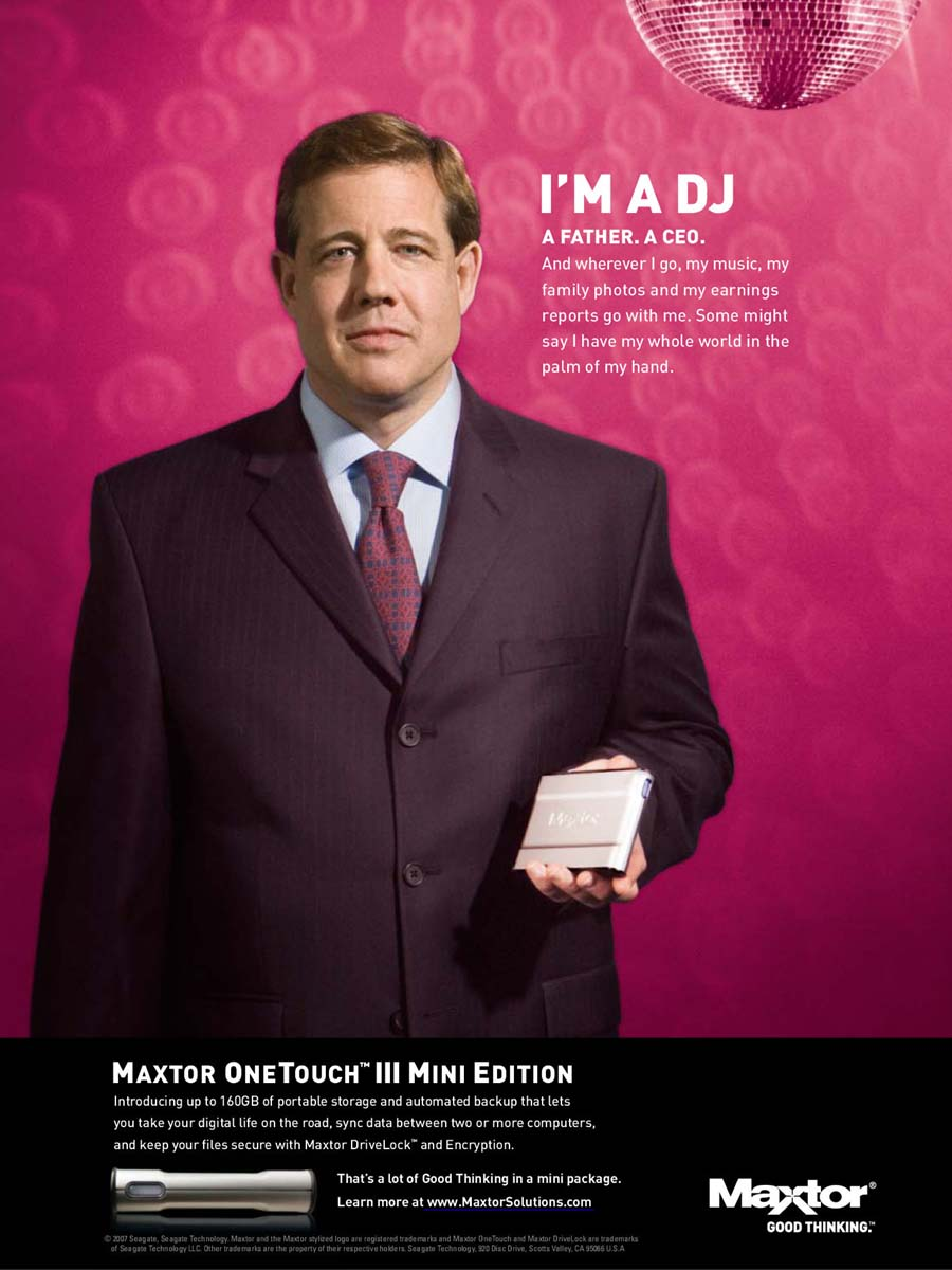
LEOPARD PLUG-IN

Ziplight 1.2

RATING: ♦♦♦½ **PRICE:** free **COMPANY:** Bartas Technologies **URL:** www.bartastechnologies.com

Mac OS X's Spotlight technology supports plug-ins, which let you expand the range of file types Spotlight can search. One of my favorites is Ziplight 1.2, which enables Spotlight to search the names of files inside compressed zip files, such as the archives you can create in the OS X Finder. Normally these files are invisible to Spotlight, but with Ziplight you no longer have to expand such archives just to see if the file you're looking for is hidden inside. However, Spotlight still won't be able to search the *contents* of a file inside a zip archive; you'll need to expand the archive first to do that. ☒

Senior Editor **Dan Frakes** is always looking for great, low-cost products. Send your thoughts on this column, or on things you'd like to see in future columns, to macgems@macworld.com.



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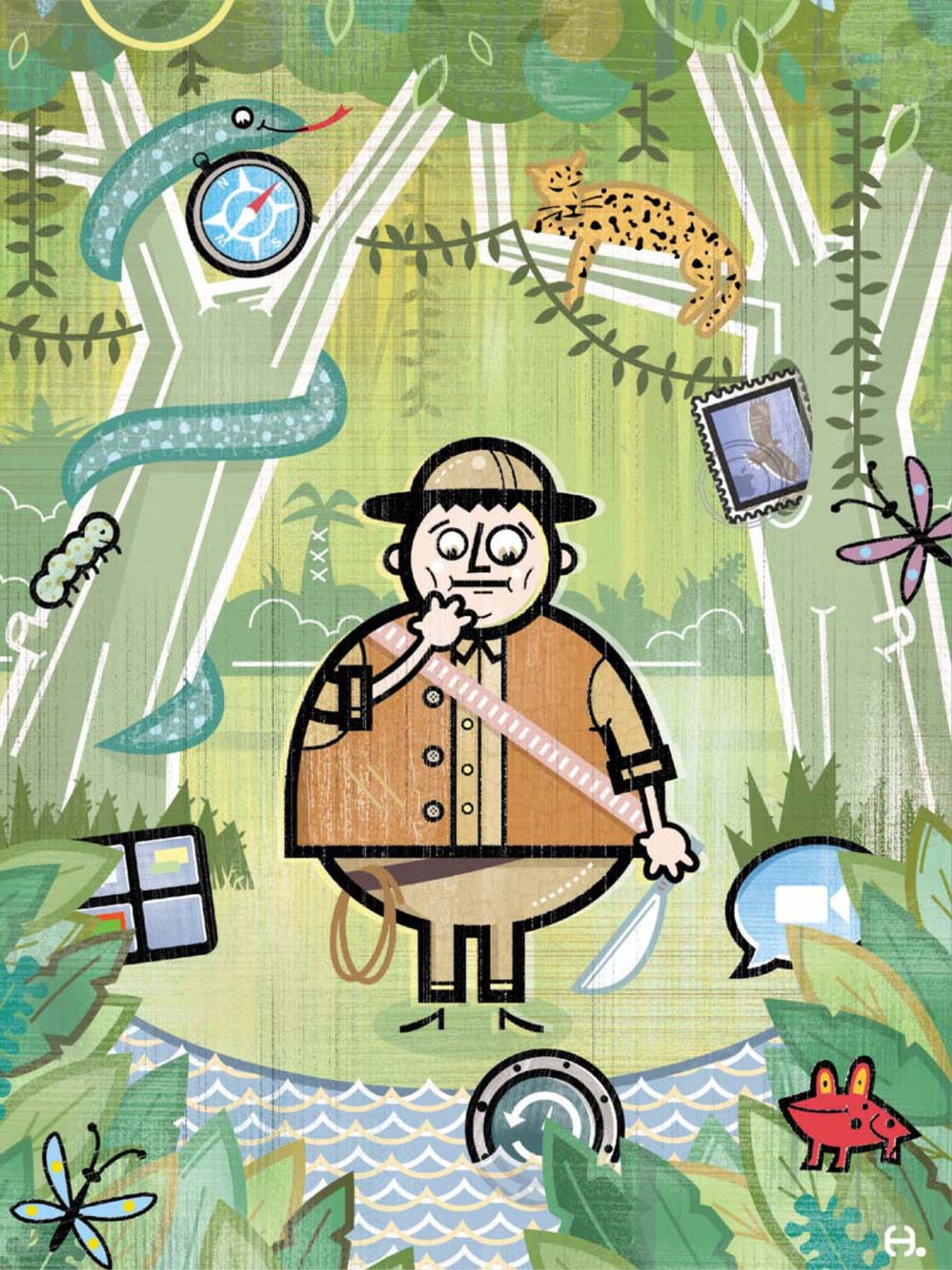


YOUR LEOPARD SURVIVAL GUIDE

WE TRACK DOWN THE BEST SHORTCUTS, HIDDEN FEATURES, AND POWER TIPS IN MAC OS X 10.5

Sometimes it takes a while to really get to know someone. What at first seems to be a charming quirk can, after prolonged exposure, become an irritating tic. And what at first seems puzzling can start to make sense. If the relationship is to thrive, you have to make the most of the good stuff and work around the bad.

The same goes for operating systems. What seems like a gratuitous little nothing turns out to be a tool you use a dozen times a day. And what at first seems to be a really cool new feature may turn out to be something that just gets in the way. So you learn ways to maximize the former and avoid the latter.

In that spirit, here are a few things we've learned about OS X 10.5 while living with it for the past few months. We've got 50 tips and tricks for working smarter with the new Finder, the new desktop, and other new tools. We've also asked three of our most seasoned editors—Christopher Breen, Dan Frakes, and Rob Griffiths—to tell us which Leopard features they're using a lot, which ones they're not, and which ones they really dislike.

Ever said, "If only I'd known then what I know now . . ." about a person? Here's your chance to avoid that regret with Leopard.

Illustrations by Jack Hornady

Finder

Remove the Stripes

Leopard's new Finder includes a number of aesthetic changes. One of them, the blue-and-white-striped background for List-view windows, isn't universally liked. If you'd rather have white backgrounds, open Terminal and type the following:

```
defaults write
com.apple.finder
FXListViewStripes
-bool FALSE
```

Then relaunch the Finder by holding down the option key, control-clicking on the Finder icon in the Dock, and selecting Relaunch. To get the stripes back, repeat the procedure, substituting `TRUE` for `FALSE`.—DAN FRAKES

Put the Path Bar on Top

The Finder's Path Bar is one of Leopard's handiest features. Select View: Show Path Bar, and the path to the current open folder will appear at the bottom of the window. That display is also functional: you can drag an item onto any of the folders shown in the Path Bar to move the item to that folder, and you can double-click on any folder in the path to quickly switch to that folder. If you want to see the path to the current folder at the *top* of the window, open Terminal and type the following:

```
defaults write com.apple.finder
_FXShowPosixPathInTitle -bool YES
```

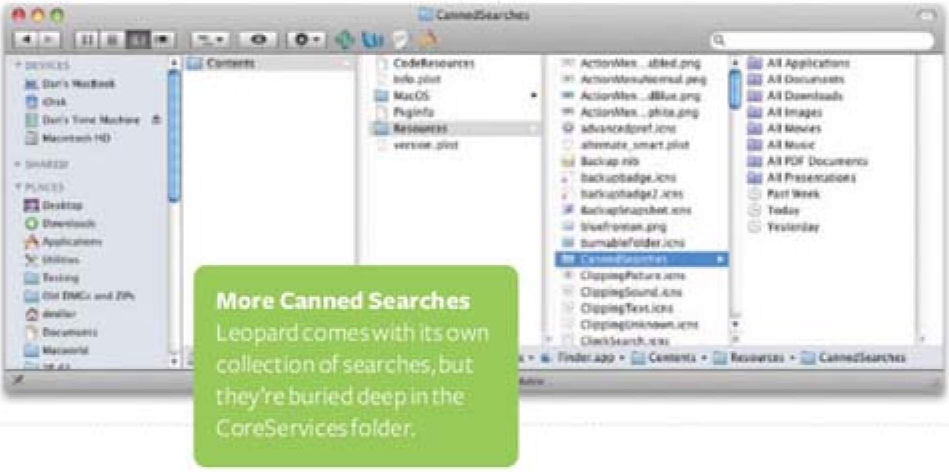
Then press return. Next, hold down the option key and control-click on the Finder icon in the Dock; then select Relaunch. From now on, the path should appear, in traditional Unix format, in the title bar of all your Finder windows. To undo the change, repeat the procedure, replacing `YES` with `NO`.—DF

Get Info in Open and Save As Dialog Boxes

While browsing an Open or Save As dialog box, you can get information about any file by selecting it and then pressing ⌘-I.—DF

Add More Canned Searches

There are a number of predefined searches available in the Search For section of the Finder's sidebar—and there are some other searches that didn't quite make the cut. To find them, go to /System/Library/CoreServices and control-click on Finder.app. From the pop-up menu, choose Show Package Contents; then navigate to /Contents/Resources/CannedSearches. There, you'll find searches for All Applications, All Music, and All Presentations, among others. If you'd like to add any of these canned searches to your sidebar, first copy it to the desktop. Then control-click on it and choose Show Package Contents from the pop-up menu. In the first folder that opens is a search.savedSearch file. Rename this file to whatever you like, and drag it into the sidebar. (Of course, instead of doing all that, you might just want to write a canned search of your own.)—ROB GRIFFITHS



More Canned Searches Leopard comes with its own collection of searches, but they're buried deep in the CoreServices folder.

Save Searches in Open and Save Dialog Boxes

The sidebar in Open and Save dialog boxes is similar to the sidebar in Finder windows—except that the Search For section and its saved searches are conspicuously absent. But you can add saved searches to Open and Save dialog boxes: In the Finder, go to the folder containing your searches (*your user folder*/Library/Saved Searches by default), and drag the desired searches to the sidebar's Places section. The next time you're in an Open or Save dialog box, you'll be able to access the contents of the searches saved in Places.—DF

Preview PDFs in Column View

When you're browsing your files in Column view, a large preview icon of the selected item appears in the rightmost column. If you're previewing a PDF document, moving the mouse cursor over the preview icon brings up back and forward buttons that let you flip through the pages of the document right there in the icon preview.—DF

Reorder File Names with Leading Spaces

There's an old trick many Mac vets use to force certain files and folders to the

A Second Look at Leopard: Rob Griffiths

THE GOOD

I really like the **Path Bar**, especially paired with the Column view. **Screen sharing** works amazingly well. I'm surprised by how much I like the new **iChat**—it's nice to see how **file transfers** are progressing, and to **record video and audio chats**. In **Mail, data detectors** work really well—can we get them in other programs, too?—and the **new search feature** is great. When I first heard about **Quick Look**, I thought, "Sounds interesting." Now I'm using it all the time. I never thought I'd use **Spaces**, but it removes background clutter. **Spotlight 2.0** is nearly perfect. **Time Machine** will change the way people think (or more accurately, don't think) about backing up. My other favorite changes are **Help menu searches**, **live partition resizing in Disk Utility**, **AutoFS**, and upgrades to **Terminal**.

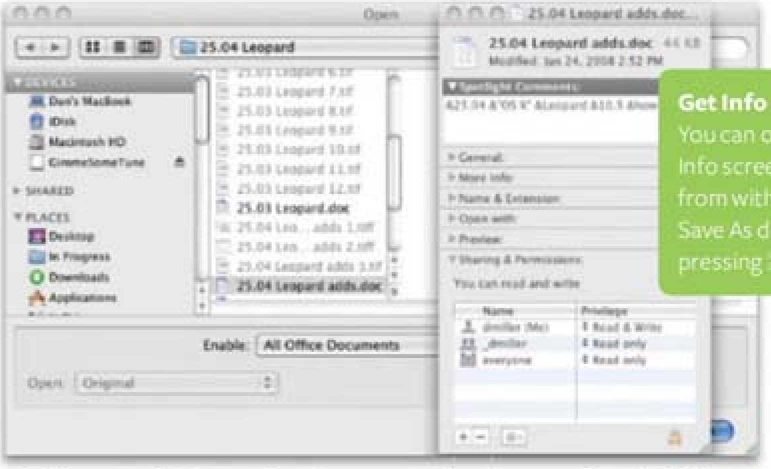
THE BAD

Automator does indeed have **variables**, but I've had issues with getting them to work properly. And **tagging downloaded applications** for greater security is more annoying than anything else.

THE UGLY

The **Finder's new sidebar** is a stinker: You can't rearrange the main categories, you can't get rid of the search header, you can't change the font or the text size, and you can't access it with the keyboard. I'm also hating the new **iCal: in-line editing** makes creating, editing, and viewing events about ten times more difficult than before. Several new features in **Mail**—especially **notes**, **RSS feeds**, **stationery**, and **to-dos**—are just worthless to me.

top of directory listings: they insert a leading space at the beginning of the file's or folder's name, which forces that item to the top of any view that's sorted by name. You can control the order of many items at the top of such a list by using multiple spaces, too. Items with more spaces in front of their names move closer to the top of the list. And until Leopard, you could select one of these files by just pressing the spacebar while browsing a directory with such files in it. In 10.5, however, the spacebar has been assigned a new task in the Finder: it invokes Quick Look. But you can still use the old leading-space trick by adding the option key to the mix. When viewing a folder containing a space-named file, press and hold option, and then press the spacebar. This will select the first file name with a leading space, without invoking Quick Look. If any of your other files have multiple spaces at the start of their name, you can just press the spacebar again to select them each in turn—you needn't hold down the option key after the first press of the spacebar. If you want to preview a file with a space at the front of its name, wait just a second or two after selecting the file or folder, and then press the spacebar again to invoke Quick Look.—RG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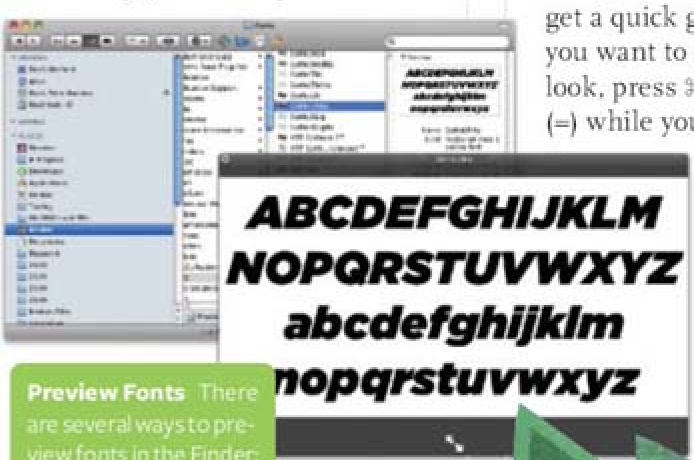
You can read and write
Name
Privilege
Read & Write
Read only
Read only
everyone

Get Info Anywhere You can open the Get Info screen for any file from within Open and Save As dialog boxes by pressing ⌘-I.

Preview Your Fonts

Prior to 10.5, you could preview a font in Font Book or in a program that supported font previews. Leopard offers several new ways to preview fonts. If you just want a quick idea of what your fonts look like, open a fonts folder (*your user folder*/Library/Fonts, /Library/Fonts, or /System/Library/Fonts) in the Finder. In List view, the file icon will contain a very small preview of the letters *A* and g in that font. In Column view, you'll see a slightly larger version of those letters in the preview pane. Switch to Icon view, and you'll get a slightly larger preview. Switch to Cover Flow, and you'll get still larger, flippable icons. The best way to preview fonts, though, is with Quick Look. Select a font file in the Finder, and press the spacebar. Instead of seeing just the *A* and the g in that font, you'll see uppercase and lowercase versions of the entire alphabet; some fonts will also include the digits 0 through 9. This makes it simple to get a quick glance at a font. If you want to take a really close look, press ⌘-equal sign (=) while you're still in


ABCDEFGHIJKLM
NOPQRSTUVWXYZ
abcdefghijklm
nopqrstuvwxyz

Preview Fonts There are several ways to preview fonts in the Finder; Quick Look is the best.

Quick Look; you should get a close-up view of your selected font; you can zoom back out with ⌘-minus sign (–).—RG

Dock

Add Spacers to the Dock

To make your Dock more orderly, you might want to separate icons into groups. To add a space between applications in the applications area of the Dock, launch Terminal and enter this:

```
  defaults write
com.apple.dock
persistent-apps -array-
add '{tile-data={};
tile-type="spacer-
tile";}'
```

To add a space between documents on the right side of the Dock, type this:

```
  defaults write com.apple.dock
persistent-others -array-add
'{tile-data={};
tile-type="spacer-tile";}'
```

To see the changes you've wrought, type `killall Dock` in the command line. If you want to get rid of a space you've added, just drag it off the Dock. —CHRISTOPHER BREEN

Quick-Toggle Dock Magnification

You can enable and disable Dock Magnification (which enlarges Dock icons as you move your mouse cursor over them) via the Dock's preference pane. If Magnification is disabled but you want to enable it temporarily so you can get a better look at a particular icon, simply hold down shift-control as you move your mouse cursor over the Dock. Icons will be magnified as long as you hold down those keys. This also works in reverse: if Dock Magnification is enabled, holding down shift-control will temporarily disable it.—DF

Navigate the Dock with the Keyboard

You could use your keyboard to control the Dock in previous versions of OS X, and Leopard's Dock is even more keyboard-friendly. As before, you can activate the Dock by pressing control-F3. But now, in addition to using the left- and right-arrow keys to select icons, you can type the first letters in the name of the program, file, or folder you'd like to select. The Dock will highlight matches as you type. Matching is based on the full name of the program as shown in the Finder, so you may want to do some renaming to make this more intuitive. For instance, if you remove *Microsoft* from the names of Office applications, you can type `Exc`, `Pow`, and `Wor` to select Excel, PowerPoint, and Word, respectively. And as before, once you've selected an icon, pressing return will open it, while pressing the up-arrow key will summon its Dock menu.—RG

Stacks

Add a Recent-Items Stack

Another feature that Apple has included in Leopard but hasn't made easily available is a recent-items stack. To get it, type the following in Terminal:

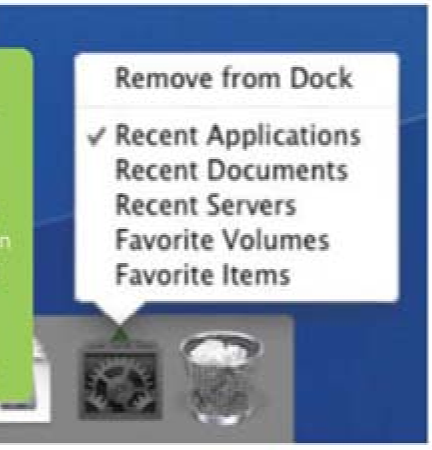
```
  defaults write
com.apple.dock
persistent-others
-array-add
'{ "tile-data" =
{ "list-type" = 1; };
"tile-type" =
"recents-tile"; }'
```

Then press return and type `killall Dock`.

Choose the kinds of items that appear in this stack by control-clicking on it and selecting applications, documents, servers, volumes, or items (namely, entries in the Places section of your Finder sidebar).—DF

Add a Trash Stack

Want to be able to quickly view and restore recently deleted files? Create a Trash stack: open a new Finder window and press ⌘-shift-G to open the Go To Folder dialog box. In the input area, type `~/.Trash`; then click on Go. You should now have a Finder window displaying the contents of your Trash. When you drag the Trash's proxy icon from the window's title bar to your Dock, the Finder will create a Trash stack.—RG



Recent-Items Stack With a Terminal command, you can add a recent-items stack to your Dock—then you can customize it to show recent documents, applications, and more.

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Drag and Drop from Stacks

If you want to launch a stack item in an application other than the one it normally opens in, you can drag the item from its stack onto the program you want to use, whether the program is in the Dock, the Applications folder, the sidebar, or the toolbar. You can also drag items from a stack to another location: open that other location in the Finder, and then drag the item to it from the stack.—RG

Launch Stack Entries with the Keyboard

Once you've clicked on a stack to open it, you can use the keyboard to navigate through it. To select a particular file, type the first couple of letters of its name. You can also move through a stack with your arrow and tab keys.—CB

Open Multiple Items

If you want to open more than one item in a stack, just hold down the option key; each time you click on an item, that item will open in the Finder while the stack remains open. If the Finder isn't the frontmost application, the windows will open in the background.—DF

Add a Mouse-Over Effect

Apple has included a nice mouse-over effect that (in Grid view) highlights items in a stack as your cursor passes over them. Unfortunately, it hasn't provided an easy way to turn this feature on. The best way to do so is to open Terminal and type the following:

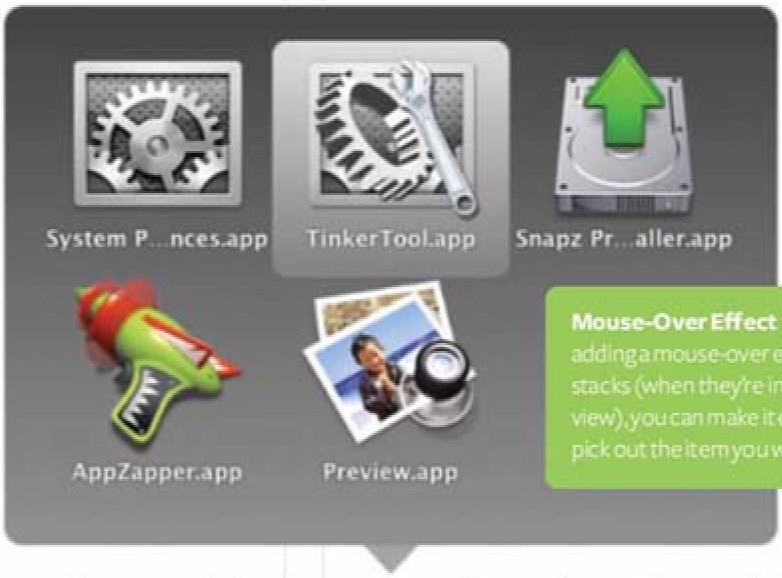
```
defaults write com.apple.dock
mouse-over-hilte-stack -boolean YES
```

Then, press return and type `killall Dock`. To change back to Leopard's stock Dock, repeat the two commands, replacing `YES` with `NO`.—DF

Quick Look

Toggle Quick Look Views

You can use Quick Look with more than one file selected—Quick Look will show the first file in the selection, and you can then use the left- and right-arrow keys to move through your selection. You could also click on the four-paneled icon in the Quick Look toolbar to view an index page showing thumbnails of every selected file, but there's an easier way to do that without leaving the keyboard: Press ⌘-return. (For extra eye candy, hold down the shift key, too, and you'll see the switchover between the two view modes in glorious though time-consuming slow motion.)—RG



Mouse-Over Effect By adding a mouse-over effect to stacks (when they're in Grid view), you can make it easy to pick out the item you want.

Mix Files in Quick Look

You can open a mix of files in Quick Look. Just select the items you want to view—pictures, text documents, movies, and audio files, for example—and press the spacebar. Click on the Index Sheet button in the resulting Quick Look window, and all the items you've selected will appear on a grid. To move from one item to another, use your arrow keys. To bring a document to the front, press the return key. To play a media file, click on the Play button. Note that the Play/Pause button is active even when you're looking at a file that doesn't "play"—a Word document, for example. If you click on Play when such a document is showing and then press the right-arrow key, the media file that appears will play without your having to once again click on the Play button.—CB

Take a Quick Look at the Trash

How many times have you tried to open a file in the Trash—for example, to make sure it's the one you wanted to delete—only to have OS X tell you that you can't open the file because, well, it's in the Trash? Thanks to Quick Look, you never have to face this situation again. Just open the Trash, select the items you want to preview, and press the spacebar to view them in Quick Look.—CB

Play a Quick Look Slide Show

You may know that you can invoke Quick Look not only by pressing the spacebar but also by control-clicking on an item and choosing Quick Look *Name Of Item*. But you may not know that you can immediately play an item (or a playlist) by control-clicking on it, pressing the option key, and choosing Slideshow *Name Of Item*. If you'd like to skip the contextual menus (and if you've got the Quick Look button in your Finder toolbar), just select items in a window, hold down the option key, and click on the Slideshow button (which, before you pressed the option key, was the Quick Look button). You can also open the File menu, hold down the option key, and choose Slideshow *Name Of Item*.—CB

Build a Better Quick Look

Quick Look is a handy way to view documents but not such a great way to sift through folders and archives. Fortunately, enterprising Mac users have designed some Quick Look plug-ins that allow you to quickly see the contents of folders and zip files. You can find a repository of such plug-ins at QLPlugins.com (www.qlplugins.com). To install the plug-ins after downloading them, place them in *your user folder*/Library/Quick Look. (You may need to create this Quick Look folder.) For more details, see this month's *Mac Gems* (page 52).—CB

Tune into TV on your Mac

Main Menu
Details
Recordings
Channels
Guide
More
1
KHCB - 9:00-10:00
Lost - Exodus
Next: 10:00-10:30 - News
08/01/15 9:21
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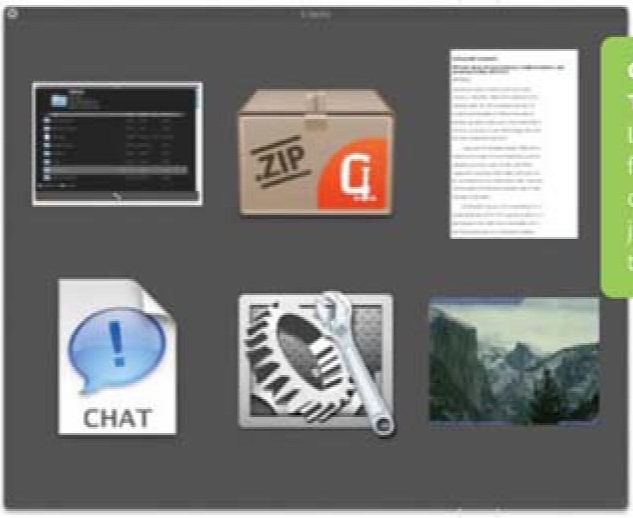


Quick Look Multiple File Types You can use Quick Look to preview multiple files, and those files can be of completely different sorts—just select them all and press the spacebar.

Spaces & Exposé

Navigate Spaces with the Keyboard

Spaces supports numerous keyboard shortcuts. For example, to display an overview of all your spaces, press F8. In this view, you can use the arrow keys to move between spaces, press the spacebar or return to display the selected space, or simply type a space number to display it instantly (spaces are numbered sequentially from left to right, starting in the top left corner). To move directly to another space, hold down the control key and type that space's number. To cycle from one space to the next, hold down control and press an arrow key. (You can, of course, customize these shortcut keys in the Exposé & Spaces preference pane.)—JOE KISSELL

Move All Windows at Once

What if you want to move all of an application's windows to another space? Sure, you can drag them one by one, but that's a pain. Instead, hold down the shift or ⌘ key before you click and hold on a window. Then, still holding down that key, drag one window of a program; all that program's other windows will follow. You can use a similar trick to move just one window to the exact same physical location in a new space. Say you've got a Finder window open, and it's about 200 pixels below and 200 pixels to the right of the Apple menu. To move this window to the exact same position in another space, start dragging the window, and then press and hold the shift key before you drop the window into the new space. When you drop the window, it will move into the same position it had in the first space.—RG

Assign an Application to All Spaces

By default, a window will stay in the space that was active when you opened it—so an application may have one or more open windows in several spaces. If you want all of an application's windows to appear in *every* space, go to the Exposé & Spaces preference pane, choose the Spaces tab, click on the plus-sign (+) button, navigate to the application, and click on Add. Then choose Every Space from the pop-up menu in the Space column next to that application's name. The Every Space setting is appropriate for applications you use constantly, such as Stickies, iTunes (especially if you have the window minimized to the controller view), and iChat.—JK

Assign the Finder to All Spaces

Each space has its own set of Finder windows—so if you want access to one folder in several different spaces, you'll have to open a new Finder window in each space. If you find this annoying, you can set the Finder to be the same in all your spaces. To do this, follow the preceding instructions for assigning an application to all spaces, but navigate to the /System/Library/CoreServices folder and select Finder.—JK

Change the Space-Switch Delay

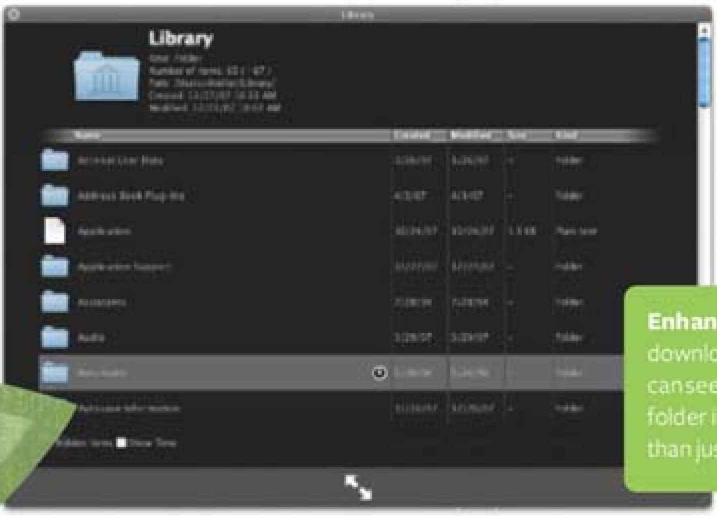
When you drag a window to the edge of your screen and hold it there for a moment, you move that window to the space next to that edge of your screen. The default delay before the window moves to the next space is 0.75 seconds. To change that delay to half a second (for example), open Terminal and enter this:

```
defaults write com.apple.dock
workspaces-edge-delay -float 0.5
```

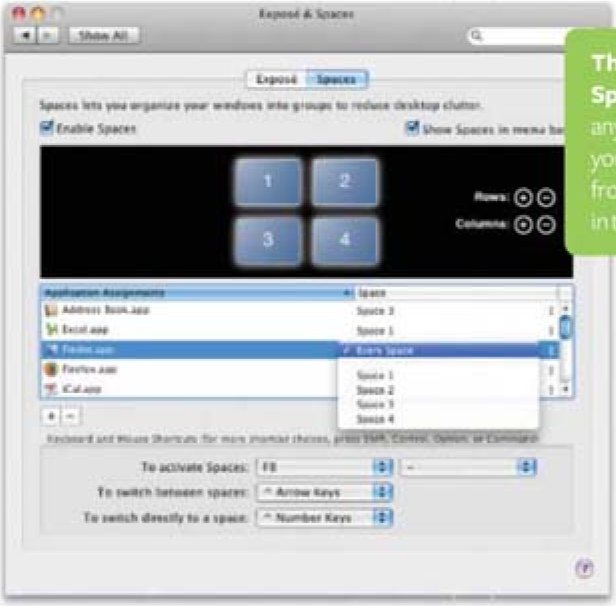
Press return, and then enter `killall Dock`. You can replace `0.5`—half a second—with whatever value you wish. To return to the original value, enter the commands again with the value `0.75`.—JK

Troubleshoot Spaces with Dock Restart

If you start having problems with Spaces and don't want to reboot your Mac, try going to Terminal



Enhancing Quick Look By downloading a plug-in, you can see the contents of a folder in Quick Look, rather than just the folder icon.



Spaces lets you organize your windows into groups to reduce desktop clutter.

☑ Enable Spaces ☑ Show Spaces in menu bar

Application Assignments	Space
Address Book.app	Space 3
Excel.app	Space 1
Finder.app	✓ Every Space
Firefox.app	
iCal.app	

Keyboard and Mouse Shortcuts (for more shortcut choices, press Shift, Control, Option, or Command)

To activate Spaces: F8

To switch between spaces: ^ Arrow Keys

To switch directly to a space: ^ Number Keys

The Same Finder in Every Space If you want the Finder (or any other program) to appear in all your spaces, choose Every Space from the Space drop-down menu in the Spaces preference pane.

and typing **`killall Dock`**. The Dock will restart and, with it, Spaces. (Alternatively, you can also restart the Dock from Activity Monitor.)—RG

View All Window Titles in Exposé

When using Exposé, you may have noticed that if you move your cursor over a window, that window's title is displayed on screen. But if you hold down the option key, *all* window titles appear on screen, making it easier to find a particular window without having to mouse over each one separately.—DF

Assign All Exposé Modes to a Single Key

By default, Exposé's three modes—All Windows, Application Windows, and Show Desktop—are assigned to three different function keys. If you're running short on function keys, you can assign those three modes to a single key with modifiers. Open the Exposé & Spaces preference pane and switch to the Exposé tab. Choose your first basic shortcut key; I use F3, which I assigned to Show Desktop. Then hold down a modifier key, such as option, and select the same function key from the All Windows pop-up menu; that modifier key is now part of the shortcut. Finally, hold down a different modifier key, or combination of modifier keys, and assign the same function key to Application Windows.—DF

Dashboard

Show Widgets on the Desktop

If you want to have a widget available from the desktop, not just Dashboard, turn on Dashboard's developer mode. (You could do this in Tiger, but thanks to Web Clip and the ability to create your own customized widgets, it's more useful than ever in Leopard.) In Terminal, enter the following:

```
defaults write
com.apple.dashboard devmode YES
```

Then press return and type **`killall Dock`**. That done, press F12 to fire up Dashboard. Click on any widget and

A Second Look at Leopard: Christopher Breen

THE GOOD

I'm not as good as I should be about backing up my Macs, but I'm better now, thanks to **Time Machine**. When I bring my MacBook Pro home from a trip, I immediately jack it into its 500GB external hard drive; Time Machine takes care of the rest. I use **Quick Look** on a regular basis. The ability to quickly view a picture, listen to a music file, preview the contents of a file, or watch a movie is invaluable. I'm back to using **Spotlight** now that the thing works. The problem is that I still run a Tiger machine on a fairly routine basis, and I forget how broken Tiger's Spotlight is. I could do **video and audio chats** in previous versions of **iChat**, but I never bothered to. For some reason, I'm doing that more now. And I've been an Entourage user for years, but ever since I had a corrupted database, it just hasn't been as stable as it once was. That's prompted me to give **Mail** another try. While I still wish its rules were more complete, I find it faster than Entourage and easier to navigate.

THE BAD

The way **iCal** handles event information is goofy. Having to click on an event to edit its information is more work than necessary. The old way may not have looked as clean, but it was more helpful. I don't know that I'll ever use **stationery**, **to-dos**, or **RSS feeds** in **Mail**. And I really thought I'd use Spaces more than I do. I tried setting it up and throwing a few applications into different spaces, but before long I went back to using DragThing to automatically hide applications as I switched from one to another. **Automator's recording functionality** isn't very functional. I'd hoped it would be more like QuicKeys and actually record what I do. At this point, it's pretty limited.

THE UGLY

In some cases, **Stacks** can be useful. For example, I like being able to open a stack in Grid view, type a couple of letters to select a file, and press return to launch the thing. Then again, Stacks kind of sucks. I understand that Apple wants to keep my desktop clear of clutter, but more often than not, I pull something I've downloaded from the Downloads stack and put it on the desktop anyway. I'm also disappointed that **Web clips** disappear when you close **Dashboard**. One might assume that if you go to the trouble of creating a Web clip, you'd like it to stick around. Apple didn't, and that's dumb.

A Second Look at Leopard: Dan Frakes

THE GOOD

Perhaps my favorite new feature is **screen sharing** in the **Finder** and **iChat**, which is great for everything from showing someone a new feature to giving remote tech support to relatives. I also really like the new folder-specific **file sharing**. I thought I'd really dislike the tiny text and inefficient use of space in the new **Finder sidebar**, but the benefits of the new **Shared** area have won me over. In the past, I couldn't use a Mac without the application-launching features of LaunchBar; Leopard's **Spotlight** is so much improved in this respect that I've been getting by without it on a few of my Macs. That's glowing praise.

THE BAD

When **Back To My Mac** works, it's great. Unfortunately, it doesn't work much of the time—a problem even Apple has admitted. I also don't use **Spaces** as much as I expected to, mainly because of some minor glitches that, taken together, make it too frustrating for me.

THE UGLY

While Apple has made major improvements to **Stacks** and the **semitransparent menu bar**, I still find the **new Dock** to be a major step backward from Tiger's: it's distracting, and its active-application indicator is difficult to see.

begin dragging it. Without releasing the mouse button, press F12 again. The widget should move out of the Dashboard layer and onto the desktop, floating above all other windows. If you want more control over the way your widgets work outside Dashboard, use Amnesty Widget Browser or Amnesty Singles ($20 and $10, respectively; www.amnestywidgets.com).—JK

Launch Dashboard with the Mouse

If you have a multibutton mouse and want to avoid using the keyboard just to invoke Dashboard, assign a mouse button to it instead. Let's say you have an Apple Mighty Mouse. Go to the Keyboard & Mouse preference pane and click on the Mouse tab. Then choose Dashboard from the pop-up menu corresponding to one of the buttons (I suggest either the scroll-ball button or squeezing the mouse). If you use a third-party mouse with its own software, follow the manufacturer's instructions for configuring its extra buttons.—JK

Resize Web Clip Widgets

If you use Safari's new Web Clip feature to make a Dashboard widget out of a small Web item, you may be dismayed to find that Safari enforces a minimum size of about 128 by 128 pixels; you can't make the Web Clip selection smaller than that. The solution is simple if not obvious: after creating the widget, click on the *I* on the widget's face and then click on Edit. You'll be able to resize and reframe the widget as you wish.—RG

System Preferences

Reveal Login Items in the Finder

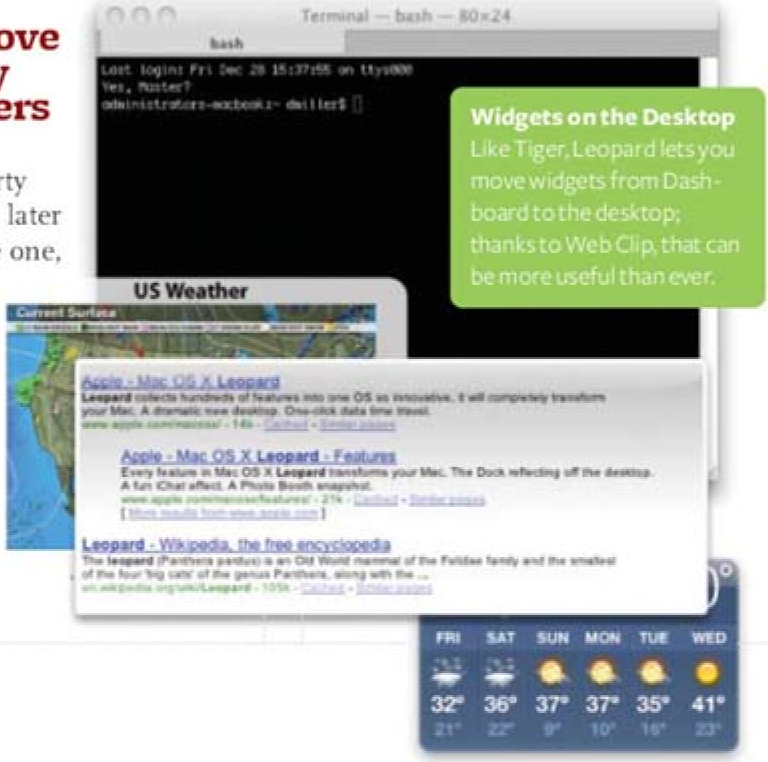
Ever wondered where some of those items in your Login Items list (in the Accounts preference pane) came from? In Tiger, you could hold your mouse cursor over an item to see its path. In Leopard, it's even easier: just control-click on any login item and then choose Reveal In Finder from the contextual menu.—DF

Easily Remove Third-Party Screen Savers

In Tiger, if you installed third-party screen savers and later wanted to remove one, you had to navigate to *your user folder*/Library/Screen Savers and then find and delete the unwanted plug-in. In Leopard, you can just go to the Desktop & Screen Saver preference pane, control-click on the offending screen saver, and choose Move To Trash from the contextual menu.—DF

Uncover Advanced Printer Options

In OS X 10.4, if you wanted to connect your Mac to a nonstandard printer, or to a standard printer using a nonstandard protocol (such as some PCL-only Windows-shared printers), you used the Advanced setup screen by clicking on the Add button in the Printer Setup Utility's toolbar, and then option-clicking on the More Printers button and selecting Advanced from the pop-up menu. From there you could choose connections such as a FireWire printer, a Bluetooth modem printer, or a Fax Printer, among many



```
Last login: Fri Dec 28 15:37:55 on ttys000
Yes, Master?
administrators-macbook:~ dmiller$
```

Apple - Mac OS X Leopard
Leopard collects hundreds of features into one OS so innovative, it will completely transform your Mac. A dramatic new desktop. One-click data time travel.
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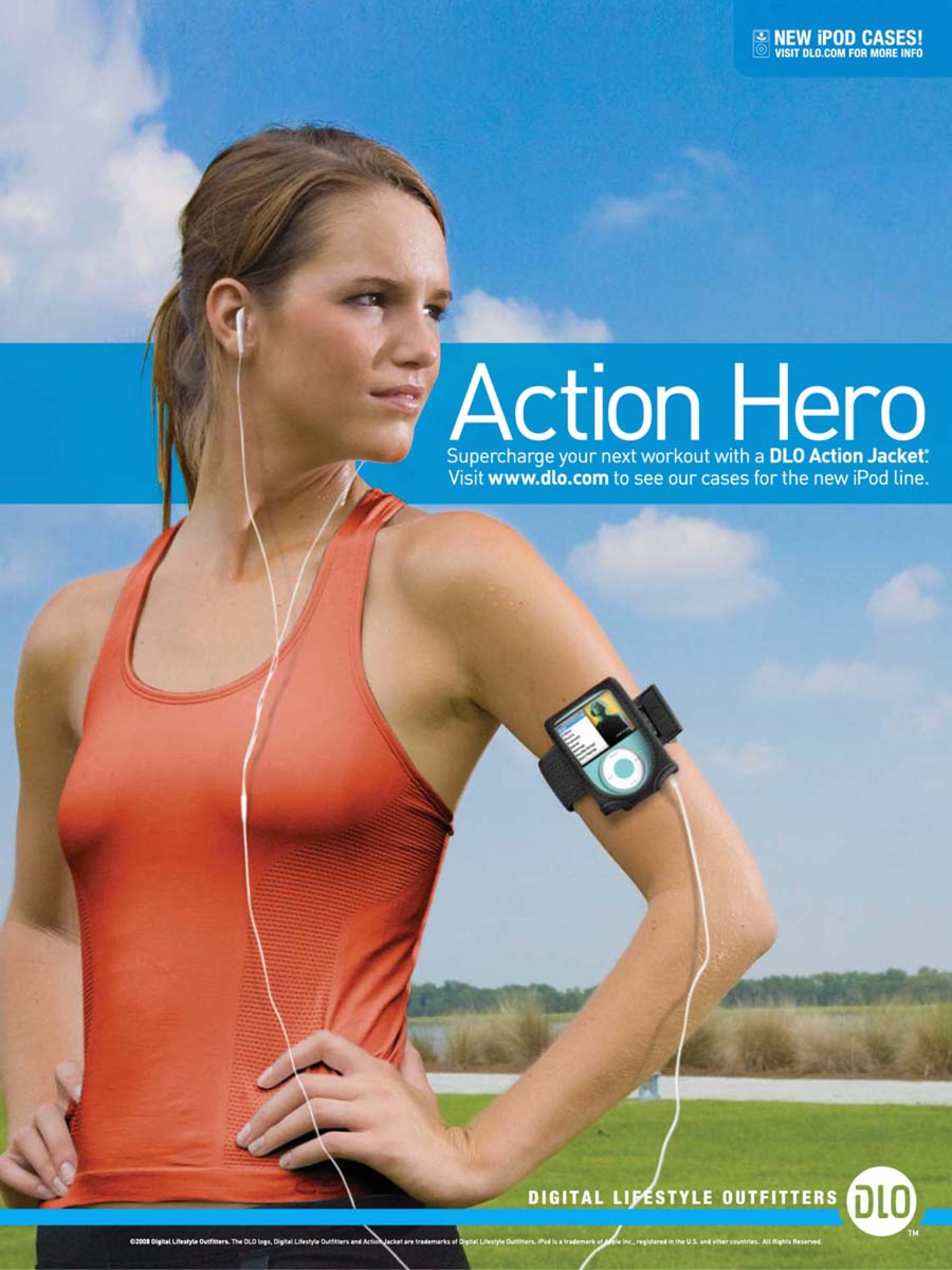
Widgets on the Desktop Like Tiger, Leopard lets you move widgets from Dashboard to the desktop; thanks to Web Clip, that can be more useful than ever.



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others. In Leopard, that Advanced screen has moved to a more accessible spot, but it's hidden by default. To reach it in OS X 10.5, first click on the plus sign (+) in the Print & Fax preference pane. When the next window appears, control-click on its toolbar and choose Customize Toolbar. When the customization sheet appears, drag the Advanced button into the toolbar, and click on Done. When you click on this new button, you'll be presented with an advanced configuration pane.—RG

Access Print & Fax Preferences Directly from Some Programs

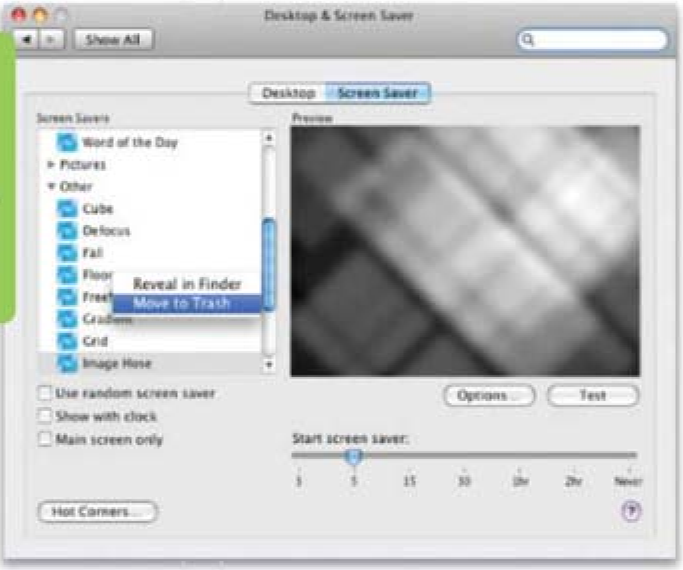
You probably already know that ⌘-P is the generic shortcut for displaying the Print dialog box. But did you know that, in some programs, you can press ⌘-P again, while the Print dialog box is on screen? What happens next—and whether this is a useful tip or not—depends on the program you're using. In Apple's Automator, Font Book, iChat, Mail, Safari, Script Editor, and TextEdit, for example, the second ⌘-P will open the Print & Fax preference pane—a useful shortcut if you need to access that pane just before printing. In Preview, pressing ⌘-P twice will actually print the current document.—RG

Use Mouse Keys on a Laptop

The Universal Access preference pane's Mouse tab (called Mouse & Trackpad on Apple laptops) has long offered Mouse Keys, a way to use the numeric keypad to control your mouse. But how do you use this feature on a laptop that has no keypad? Just use keys 7, 8, 9, U, I, O, J, K, and L as the numeric keypad. (If your keyboard has a num-lock key, you may need to press it first.)—CB

Zoom with the Trackpad

Universal Access offers a cool zooming feature. By default, you can simply hold down the control key and use your mouse's scroll wheel to zoom in on the screen. But you can also accomplish this on a laptop without a scroll wheel: on Apple laptops that offer two-finger scrolling, press control and use two fingers on the trackpad. Drag them up to zoom in; drag them down to go back to the normal size.—CB



Get Rid of Screen Savers In the past, getting rid of third-party screen savers was a pain. In Leopard, you can simply right-click and throw them in the Trash.

Copy and Paste Parental Control Settings

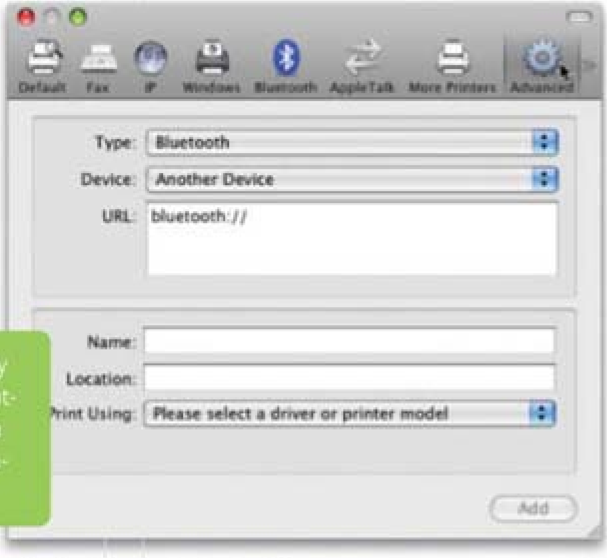
If you're setting up multiple user accounts with parental controls, and the accounts will have similar settings, first set up one account. Then, in the Parental Controls list, select that account, click on the Action button at the bottom of the window, and choose Copy Settings For *Account*. Then, to apply those settings to another account, select that account, click on the Action button, and choose Paste Settings To *Account*. Even if you don't plan on configuring each account exactly the same way, you can use this technique to copy a general set of settings and then edit them as necessary, rather than starting from scratch multiple times.—DF

Reset the Printing System

Tiger's Printer Setup Utility provided a Reset Printing System command that could often solve printing problems when all other troubleshooting techniques failed. But Printer Setup Utility is nowhere to be found in Leopard. Fortunately, Reset Printing System is still around; it's just well hidden. To find it, open the Print & Fax preference pane, and then control-click on any printer in the Printers list; you'll find the command in the contextual menu.—DF

Find Out What's On

Sometimes when you have Universal Access turned on, your Mac will start doing strange things—using its display to impersonate an X-ray machine, reciting the name of the currently selected item, and so on. This is usually the result of a slip of the fingers combined with a Universal Access feature being mistakenly switched on. Leopard can help you quickly identify the problem. Open



Type: Bluetooth
Device: Another Device
URL: bluetooth://
Name:
Location:
Print Using: Please select a driver or printer model

Advanced Printer Options By adding a new icon to the Add Printers dialog box, you get access to a slew of advanced printer-configuration options.

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the Universal Access preference pane and enable the Show Universal Access Status In The Menu Bar option. That done, you should see a Universal Access icon in the Mac's menu bar. Click on that, and you'll see a list of Universal Access options and the current state of each—Mouse Keys On, for example. Note that this truly is a status menu: it shows only what's on and off. To fix the problem, you'll have to go back to the Universal Access preference pane.—CB

Terminal

Navigate Terminal Tabs

One of the most welcome new features in Terminal is the addition of tabs. Now, instead of having five separate Terminal windows open, you can have just one window containing five tabs. Creating a new tab is as simple as pressing ⌘-T, and you can switch between tabs by pressing ⌘-shift-[(left bracket) and ⌘-shift-] (right bracket). If you find those last two combinations awkward to remember and to execute, you can reassign them in the Keyboard Shortcuts section of the Keyboard & Mouse preference pane. But that's time-consuming, and you'll have to repeat it on each machine you use. Instead, try pressing ⌘-shift and the left- or right-arrow key. These undocumented shortcuts are, for me at least, easier to use and remember than using the brackets. If you leave out the shift key, these shortcuts will cycle between open windows.—RG

Manage Terminal Tabs

Terminal tabs can perform many of the same tricks as Safari tabs. You can turn any tab into a new window simply by dragging it off the tab bar. You can rearrange tabs by clicking and holding on a tab, sliding it along the tab bar, and then releasing the mouse button; as you move one tab, the others will jump out of the way. You can also merge multiple windows into one tabbed window. If you have many open windows and want to combine them all, just use the Window: Merge All Windows menu command. If you'd rather be more selective about which windows get merged, you can drag and drop a stand-alone window into the tab area of another window. (For this trick to work, the tab bar must be visible in both windows.) To set the tab bar to be always visible, use the View: Show Tab Bar menu item.—RG

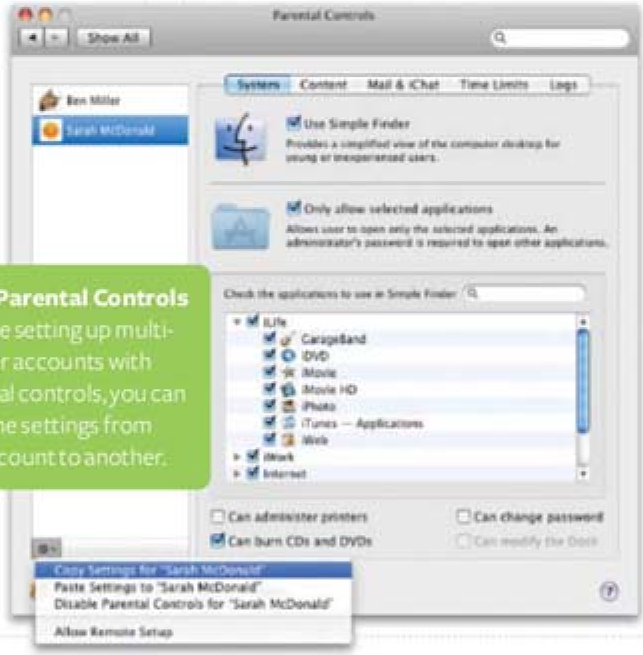
Customize the Command Line

In previous versions of OS X, you'd see a "Welcome to Darwin!" message whenever you opened a new Terminal window. In OS X 10.5, though, all you'll see is the date and time of your last new Terminal window. If you'd like the old welcome message back—or any other welcome message, for that matter—open Terminal and enter `cd /etc`, press return, and then type `sudo pico motd`. That second command launches a text editor and loads a new file called motd (Message Of The Day). Type whatever you like for a message (for instance, `"Welcome to the land where text is king"`), press control-X (for Exit), press Y (for Yes, to save changes), and then press return (to accept the file name, which will be shown as `motd`). From now on, new Terminal windows will display your new greeting, right below the date and time of the last login.—RG

Miscellany

Improve Screenshot Selections

Pressing ⌘-shift-4 has long allowed you to take a screenshot of a selection of your screen, but in Leopard, you can fine-tune your selection by using several keyboard modifiers. While selecting a region of the screen, you can press the shift key to lock the selection area along the *x*- or *y*-axis, and press the option key to change the resize-selection mode so it resizes from the center instead of from a corner; you can also press option-shift to resize from the center along a single


Parental Controls
Show All
System
Content
Mail & iChat
Time Limits
Logs
Ben Miller
Sarah McDonald
Copy Settings for "Sarah McDonald"
Paste Settings to "Sarah McDonald"
Disable Parental Controls for "Sarah McDonald"
Allow Remote Setup

☑ Use Simple Finder

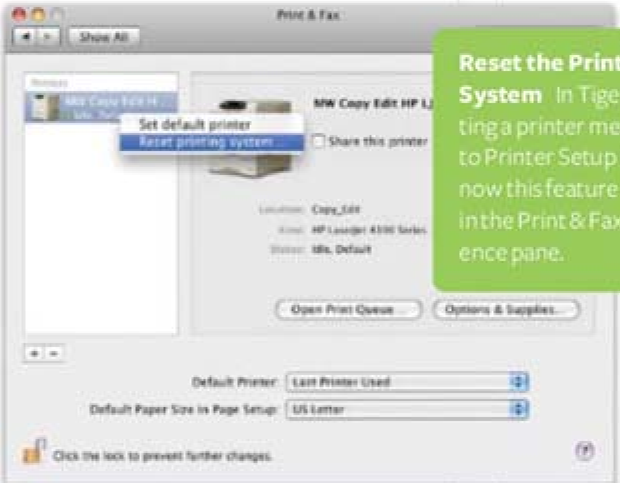
☑ Only allow selected applications

Check the applications to use in Simple Finder

☑ iLife
☑ GarageBand
☑ DVD
☑ iMovie
☑ iMovie HD
☑ iPhoto
☑ iTunes — Applications
☑ iWeb
☑ iWork
☑ Internet

☐ Can administer printers
☑ Can burn CDs and DVDs
☐ Can change password
☐ Can modify the Dock

Copy Parental Controls If you're setting up multiple user accounts with parental controls, you can copy the settings from one account to another.



MW Copy Edit HP L

Location: Copy_Edit

Kind: HP LaserJet 4300 Series

Status: Idle, Default

Default Printer: Last Printer Used

Default Paper Size in Page Setup: US Letter

Reset the Printing System In Tiger, resetting a printer meant a trip to Printer Setup Utility; now this feature is hidden in the Print & Fax preference pane.

axis. Pressing the spacebar freezes the size of the selection area and lets you move that area on screen.—DF

Banish the Printer Icon

In OS X 10.5, Apple changed the way the system handles printer icons. In OS X 10.4, the printer icon vanished as soon as a print job completed; in OS X 10.5, it sticks around in the Dock even after the job is done. If you prefer Tiger's vanishing act, the fix is simple: when the print job completes, control-click on the printer icon in the Dock and choose Auto Quit from the pop-up menu. From now on, the printer icon will vanish from the Dock after each print job. You'll have to repeat this process for each printer you use, but you'll have to do it only once per printer.—RG

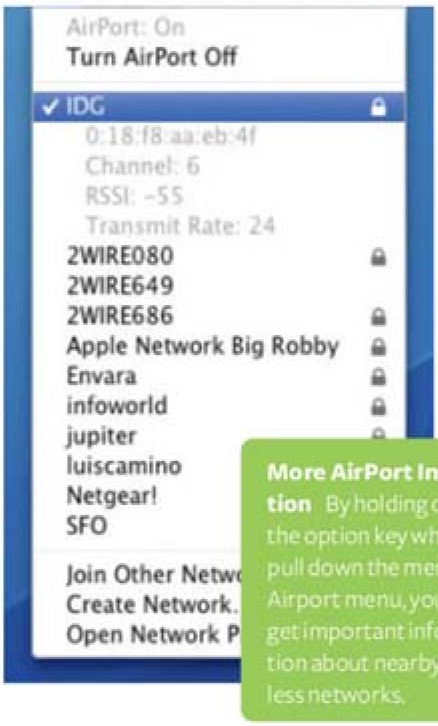
Shortcuts to PDFs

You can now assign keyboard shortcuts to the entries in the Print dialog box's PDF drop-down menu (the one that appears when you click on the PDF button). So, for instance, if you often save PDFs with the Save As PDF menu option, you can activate just that feature with a keyboard shortcut (after opening the Print dialog box by pressing ⌘-P). Open the Keyboard & Mouse preference pane, and then click on the Keyboard Shortcuts tab. Click on the plus sign (+) at the lower left to add a new shortcut, and when the new dialog box appears, leave the Application pop-up menu set to All Applications. In the Menu Title box, enter the *exact* text of the PDF menu command you'd like to create a shortcut for. So, for example, to create a shortcut for saving the print selection as a PDF, you'd enter `Save as PDF...`. For the keyboard shortcut, enter whatever shortcut you'd like to use to activate the chosen menu item—I used ⌘-option-P. Once you've entered the key combo, click on the Add button. To test it out, switch to any document in any application and press ⌘-P. When the Print dialog box appears, press your keyboard shortcut, and you should see the Save dialog box asking you where you'd like to save your PDF. You can repeat this process for any other PDF commands you'd like shortcuts for.—RG

Get AirPort Details

The AirPort icon in the Leopard menu bar contains a lot of useful information, but it's hidden by default. To reveal it, hold down the option key when you click on the AirPort menu icon. Once the menu opens, you should see more-detailed information below the name of the network to which you're connected: the hardware (MAC) address of the wireless station, which channel is in use, the signal strength (RSSI), and finally an indication of the data transmission rate. If there's a negative number next to Signal Strength, don't worry: a perfect connection would be represented by an RSSI of 0. A negative number simply means the signal is less than perfect. While you've got the menu open and the option key pressed, move your mouse over one of the other networks on the list. Hover over the network name for a second, with the option key still pressed down, and a tooltip will pop up showing the network's signal strength and the type of security it's using. This can be very useful info if you're out and about somewhere with lots of wireless hotspots; at a glance, you can find the public connection with the strongest signal.—RG

Copy Text between Two Macs



0:18:f8:aa:eb:4f

Channel: 6

RSSI: -55

Transmit Rate: 24

More AirPort Information By holding down the option key when you pull down the menu bar's Airport menu, you can get important information about nearby wireless networks.

Leopard's screen sharing is great. Apple has even included a way to send items to and from a remote Mac's Clipboard, using the Edit: Send Clipboard and Edit: Get Clipboard menu items. But there's a simpler way to retrieve a snippet of text from the remote machine: you can drag and drop text to and from the remote Mac. Say you want to copy a URL from the browser on a remote machine to your local Mac. Just highlight the URL in the address bar of the remote Mac's browser, click and hold the mouse button down for a second, and then drag the text off the edge of the screen-sharing window. After a brief delay, you'll see the dragged text appear over your cursor on the local Mac. Now just continue dragging to the destination program (your local browser's address bar, in this case), and then release the mouse button to drop the text. This trick works only with text. If you need nontext data from the other machine, use the Clipboard functions; if you need to transfer files, you'll have to do that as if you were sitting in front of that Mac—drag a file onto a mounted server, for instance, or drop it into a user's drop box.—RG

Christopher Breen, **Dan Frakes**, and **Rob Griffiths** are *Macworld* senior editors. **Joe Kissell** is the author of *Take Control of Upgrading to Leopard* (Take Control Books, 2007).

Finder File Edit View Go Window Help
Mon 10:50 AM
MacBook Air

WEIGHING THE MACBOOK AIR

Is Apple's new ultraslim laptop worth the compromises? **We put it to the test.**

By Jason Snell

PHOTOGRAPHY BY PETER BELANGER

Laptop design has always been about compromise. Though they've come a long way in the past few years, laptops have never been able to offer the features available in desktop computers, and certainly not at comparable prices. In order to squeeze an entire computer into a portable shell (and have it be power-efficient enough to run on a battery for hours at a time), computer makers have to sacrifice some features. And the smaller and lighter the laptop, the more compromises required.

The MacBook Air, Apple's latest Intel-based laptop, is the lightest, thinnest laptop Apple has ever constructed, and, according to Apple, it's the thinnest laptop ever made. And in many ways, the story of this laptop is the story of a series of compromises, all made to fit an entire Mac in a three-pound package that's three-quarters of an inch thick at its thickest point.

Backlit Keyboard The MacBook Air's keyboard features backlighting, something not seen before on Apple's small laptops.

A SILVER MACBOOK

The MacBook Air's appearance is an interesting hybrid of Apple's other two laptops. It has the shiny aluminum shell of the MacBook Pro (●●●●½; macworld.com/2907), along with a backlit keyboard—a new feature for Apple's small laptop offerings.

In all other ways, though, the Air most closely resembles the MacBook: in two of its three dimensions, it differs only in thickness. (And that difference is striking—the MacBook is 1.08 inches thick, while the Air is 0.76 inches thick at its hinge, tapering to 0.16 inches at its front edge.)

The MacBook Air's keyboard has the same square-key-capped design as that on the MacBook. And its 13.3-inch, 1,280-by-800-pixel display is identical in size to the one on the MacBook. However, the Air's screen is notably different because of what's lighting it from behind: a light-emitting diode (LED). The LED backlighting is extremely bright and immediately turns on at full brightness. The MacBook's screen backlighting, in contrast, starts out somewhat dim and gradually increases in brightness.

MacBook Air

●●●½

PROS: Weighs three pounds; bright LED-backlit 13.3-inch screen; full-size keyboard.

CONS: Slow processor; slow and small-capacity hard drive; limited configuration options; unswappable battery.

PRICE: $1,799

COMPANY: Apple, www.apple.com

FULL REVIEW: macworld.com/3388

Like the MacBook Pro, the MacBook Air uses a tiny light sensor, located behind a set of microperforations to the left of its iSight camera, to automatically adjust the brightness of the display and to control the keyboard's backlighting.

Despite its ultrathin profile, the MacBook Air doesn't feel fragile. The keyboard feels solid, as does the Air's entire bottom half. There is a bit of flexion on the top of the laptop—the portion behind its screen—but even there the MacBook Air still feels sturdy.

BY RETAINING THE DIMENSIONS OF THE REGULAR MACBOOK, THE MACBOOK AIR CAN OFFER A FULL-SIZE KEYBOARD AND A GENEROUS WIDE-SCREEN DISPLAY.

THIN AND LIGHT

It's clear that Apple's engineers followed a specific set of design constraints for the MacBook Air. By retaining the dimensions of the regular MacBook, the MacBook Air can offer a full-size keyboard and a generous wide-screen display.

With the keyboard and display dimensions set, the MacBook Air has only two other ways to distinguish itself from its cousins: thickness and weight.

Let's start with weight, as this is one measurement where the MacBook Air truly excels. Prior to the Air's release, Apple's lightest laptop was the MacBook, which weighs five pounds.

If your laptop lives most of its life on a desk, weight isn't an issue. If you carry it with you at all times, weight can be the crucial characteristic. Most people's laptop use falls somewhere in between.

My laptop is my primary Mac at home and at work, and I carry it on my back for at least 20 minutes every weekday, to and from work. The lighter my backpack, the better. Shedding two pounds out of my backpack noticeably lightens my load.

The MacBook Air takes that easy feeling to an extreme. Though it doesn't feel quite as solid in my hand as the 12-inch PowerBook (owing to the latter's additional thickness), it feels as thin and light as a loaded manila folder or a couple of magazines.

That brings us to the MacBook Air's thinness. This product seems to have been designed specifically to be as thin as possible, with an eye toward making the marketing claim that the MacBook is "the world's thinnest notebook."

There is no denying that the MacBook Air's thinness makes it visually striking. But I'm not convinced of the utility of that thinness. It seems that the Air has slimmed down in the least important dimension.

I don't believe the extra thinness is going to gain me much working room when I'm wedged in a coach airline seat behind someone whose seat is fully reclined—or on my daily bus commute, when I'm sitting in a seat so small it makes coach feel like business class. In these situations, reduced depth would be more likely to improve the angle of my screen and keep the front of my laptop from pressing against my chest.

MAKING DO WITH LESS

To make the MacBook Air small and light, Apple had to remove features once considered standard on all Apple laptops. This model is the first in recent memory to have no built-in CD/DVD drive and no FireWire ports. Its internal storage is limited, as is its capacity for connecting peripherals.

Let's start with the optical drive. Yes, you can buy an 8× SuperDrive for $99 as an add-on. (It will add seven-tenths of a pound to your bag and doesn't exactly look elegant when it's hanging off the side of your thin MacBook Air.) If you live and die by the ability to burn or play back CDs or DVDs, however, the Air's lack of an optical drive is a major drawback.

Apple has, to its credit, exerted quite a bit of muscle in an attempt to make this a nonissue. In addition to selling the external SuperDrive, the company has added a feature called Remote Disc that allows the Air to take over the optical drive of another computer (Mac or PC) on your local network. Just install the Remote Disc software (included on the Air's install disc), and the MacBook Air can use Bonjour to browse your network and read what's on any data disc. This feature worked well in my testing. The MacBook boot software has even been updated for the Air so that it can boot via Remote Disc in the event that you need to reinstall Mac OS X.

Although Remote Disc is a nice addition, it has limitations. It's meant for installing programs and copying files; it doesn't work as a remote DVD player or CD ripper. Apple helpfully suggests that the iTunes Store stands ready to assist you in all your music, movie, and TV show needs, but of course many users may prefer to consume content that originally began its life on an optical disc. You can use a tool such as HandBrake (●●●●◐; macworld.com/3104) to make DVDs watchable on your Mac, as well as on your iPod or iPhone, but converting a movie with it can be time-consuming.

ONE DOOR, THREE PORTS

To see more of the MacBook Air's feature compromises, look no further than the cute flip-down door on the laptop's right side. Upon lowering the door, you can see that the MacBook Air offers only three ports: a headphone jack, a USB port, and a micro-DVI port.

Apple hasn't compromised when it comes to the MacBook Air's video-out capabilities, however. They match the MacBook's, including the ability to drive an external monitor as large as Apple's 23-inch Cinema Display (1,920 by 1,200 pixels). The MacBook Air also shares the MacBook's Intel GMA X3100 graphics processor circuitry, which means neither laptop will ever be a gaming powerhouse.

More of a compromise is the pathway by which users can attach peripherals to the MacBook Air: through a single USB 2.0 port. If you want to attach more than one USB device to the MacBook Air, you'll need to invest in a USB 2.0 hub.

In a desk-bound configuration, this can actually work quite well. In my testing, I attached the MacBook Air to the USB port of the aforementioned 23-inch Apple Cinema Display, and then to a Belkin four-port USB 2.0 hub. I managed to attach an external hard drive, an iPod, an iPhone, an Apple keyboard, a Kensington trackball, and the MacBook Air's own USB Ethernet adapter all at once, without any trouble.

However, using USB devices on the road could prove problematic.

Beyond its sheer . . . singularity, the MacBook Air's USB port has other ramifications. It's a sign that the MacBook Air is the first Mac in years to eschew FireWire, the once-ubiquitous Apple-created connection technology that now seems to be slowly fading into irrelevance. The disappearance of FireWire brings up several other problems. If you've invested in a digital camcorder that connects to your Mac via FireWire and you count on being able to pull video off that camcorder while traveling with a laptop, you'll be out of luck with the MacBook Air.

What's more, without FireWire there's no Target Disk mode, a feature that lets you mount a laptop's drive on another

MacBook Air

Automatic Controls A tiny light sensor, located behind a set of microperforations to the left of the MacBook Air's iSight camera, automatically adjusts the brightness of the display.

Mac as if it were an external hard drive. Here, too, Apple has built new software to mitigate the loss of hardware functionality. A new edition of the Migration Assistant utility, which used to focus on FireWire as a transport mechanism, now lets you transfer files across an Ethernet or Wi-Fi network directly from within the program. Using a network isn't quite as fast as FireWire, but it does work.

The third port on the MacBook Air's door, the headphone jack, is the simplest of the three to comprehend: attach a pair of headphones or an external speaker to it, and you'll get sound. That's a key feature, since the MacBook Air's single internal speaker is small, tinny, and unfortunately located in the general vicinity of the arrow keys, in the bottom right corner of the keyboard.

It's a tight fit back there at the port door. And that tight fit leads to some interesting compatibility issues, too. Many devices with integrated USB plugs, such as broadband cards and TV-tuner cards, may not be able to fit in without a short USB extension cable.

Likewise, many large headphone plugs—the same ones that wouldn't fit in the iPhone's recessed headphone jack—will not fit completely in the MacBook Air's headphone jack. Using an iPhone-style headphone adapter with a small plug seemed to solve those problems.

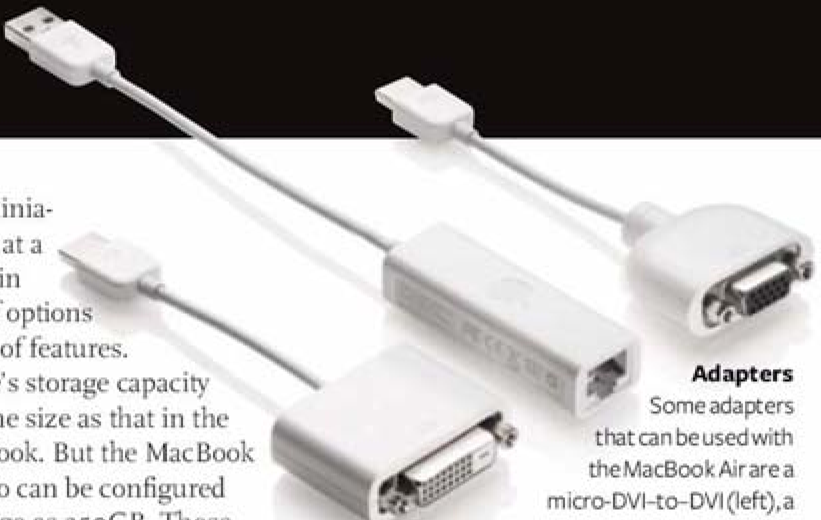
LIMITED OPTIONS

The length of the MacBook Air's motherboard has been compared to that of a pencil. All that miniaturization comes at a price, however—in terms of a lack of options and a limited set of features.

The hard drive's storage capacity is 80GB, the same size as that in the entry-level MacBook. But the MacBook and MacBook Pro can be configured with drives as large as 250GB. Those models use standard laptop drives; the MacBook Air uses a smaller, 1.8-inch drive—more like those in iPods. And space is at such a premium in the MacBook Air that even the 120GB drive once used by the iPod is too thick to fit. As a result, 80GB is currently the only size of hard drive available. And the Air's drive is slow and small, spinning at 4,200 rpm (compared with the 5,400-rpm and 7,200-rpm drives available in Apple's other laptops) and connected via parallel ATA (rather than the newer Serial ATA method used in the other MacBooks).

The Air does come with another storage option. For $999 you can have Apple swap in a 64GB SSD (solid-state drive). Though you'll be paying nearly a thousand bucks for 16GB less storage, the SSD option should use less power and be faster than the hard-drive option. Perhaps more important, the SSD—which uses flash memory like that in digital camera cards, the iPhone, and the iPod nano and touch—has no moving parts, so it should be far more resistant to shocks and far more reliable than a traditional hard drive.

Optical Drive
Though the MacBook Air does not come with an internal CD/DVD drive, you can easily attach an 8× SuperDrive via USB.



Adapters
Some adapters that can be used with the MacBook Air are a micro-DVI-to-DVI (left), a USB Ethernet (middle), and a micro-DVI-to-VGA (right).

In any event, if you're someone who needs more than 80GB of onboard storage, you'll need to slim down your data before switching to an Air (see how I did it in this month's *From the Editor's Desk*, page 13).

There is a similar lack of options when it comes to the MacBook Air's RAM. The MacBook Air comes with a stock 2GB of RAM, an excellent allotment—but Apple has a very practical reason to be so generous with the stock RAM. That's because the MacBook Air's RAM is built into the computer itself, making it inaccessible and nonupgradable.

In terms of the onboard Intel Core 2 Duo processor, Apple gives MacBook Air buyers two speed options: the standard 1.6GHz and, for $300 more, 1.8GHz. Both speeds fall short of what's available in the MacBook (2GHz and 2.2GHz) and MacBook Pro (2.2GHz, 2.4GHz, and 2.6GHz) lines.

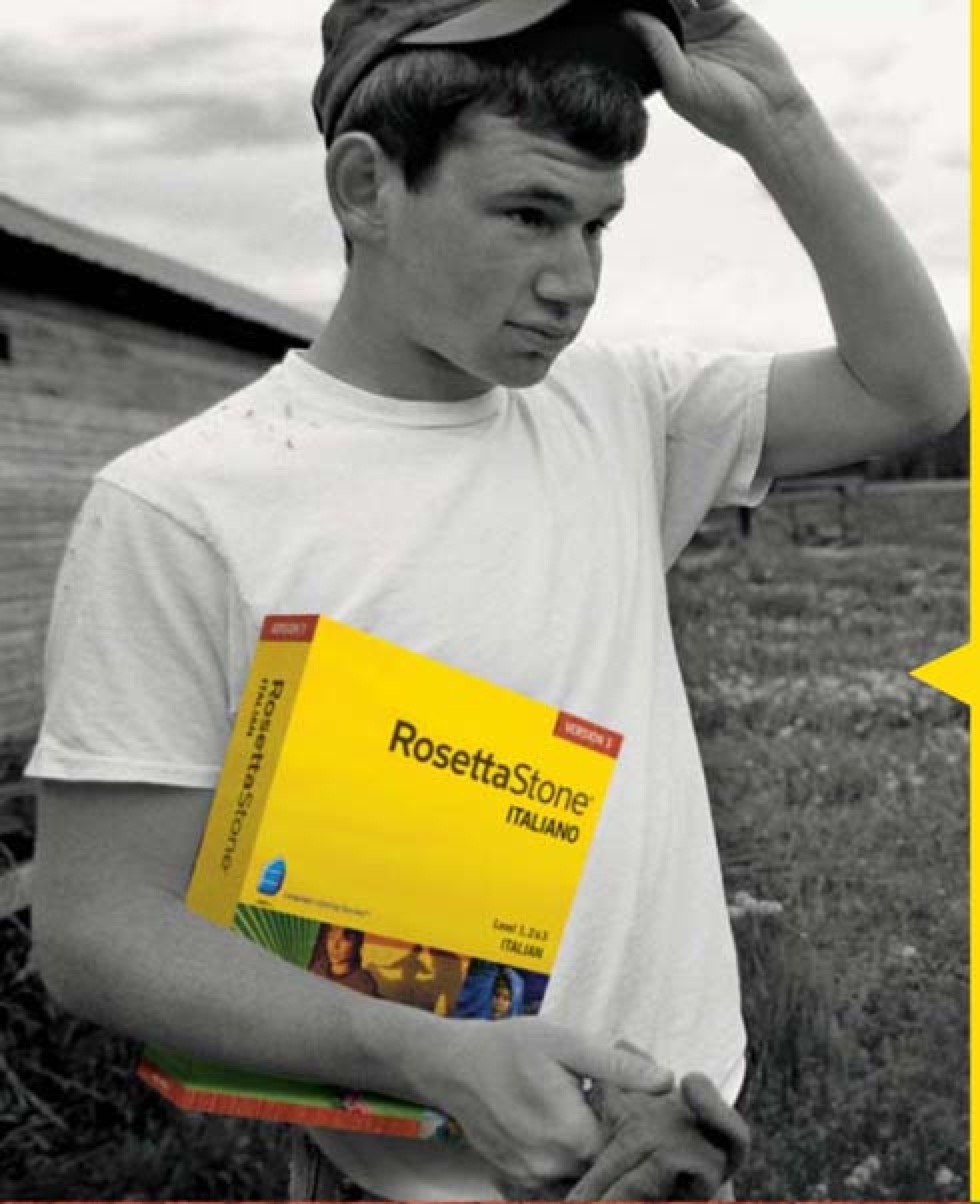
What it all boils down to is that one of the less obvious compromises built into the MacBook Air, at least for now, is a lack of customizability and serviceability.

SPEED FACTS

Macworld Lab tested the MacBook Air's $1,799 base configuration—a 1.6GHz Core 2 Duo processor with an 80GB hard drive.

The MacBook Air is quite a bit pokier than the other MacBooks. It also lagged behind one of its closest desktop cousins, the ultracompact 1.83GHz Core 2 Duo Mac mini. The Air's Speedmark score of 124 is the lowest we've recorded for any Intel-based Mac laptop, but it does handily beat our PowerPC laptop reference system, the 1.67GHz PowerBook G4.

My time with the MacBook Air came on the heels of my using a 2.16GHz



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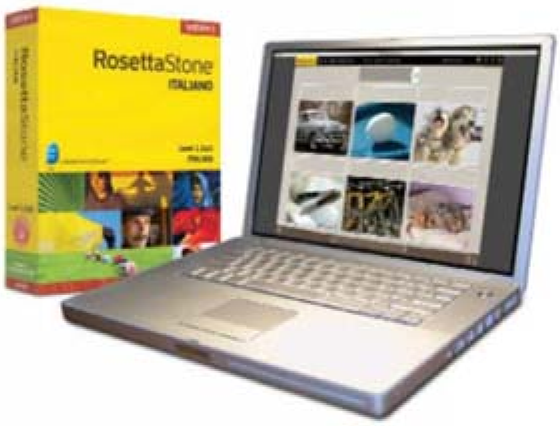

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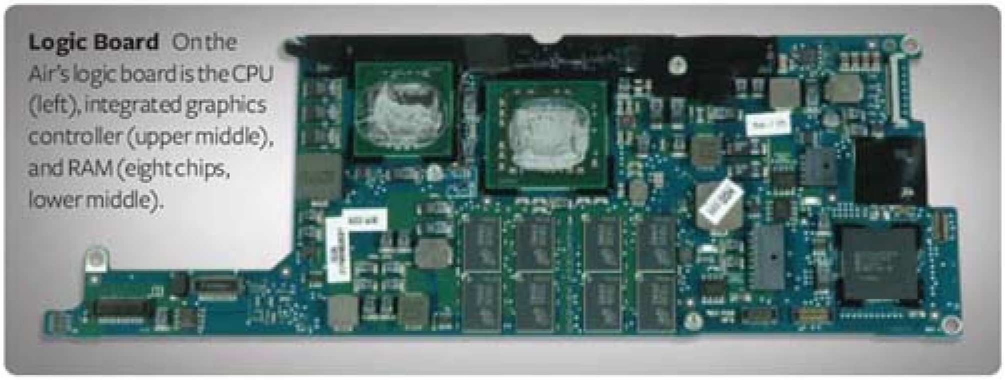


Logic Board On the Air's logic board is the CPU (left), integrated graphics controller (upper middle), and RAM (eight chips, lower middle).

MacBook, and I found its speeds in day-to-day use to be perfectly sufficient. But we did test other build-to-order Air models. A 1.8GHz model with a conventional hard drive was almost 5 percent faster than the 1.6GHz model, according to our Speedmark benchmark test, while the $3,098 laptop with a 1.8GHz Core 2 Duo processor and a 64GB solid-state hard drive outperformed a 1.8GHz build-to-order model by about 7 percent. Combine both the higher clock speed and the solid-state drive, and the performance improvements are impressive: the 1.8GHz solid-state MacBook Air outpaced the standard model by 14 percent in our Speedmark test (macworld.com/3407).

Apple's laptops have long been criticized for running hot, but in using the MacBook Air for extended stretches of time, I found that it never got particularly hot.

BATTERY INCLUDED

One of the MacBook Air's more controversial features is its battery. Not its rated battery life—although at five hours, even Apple's estimate of the MacBook Air's battery capacity is less than the six hours the company estimates for the MacBook and the 15-inch MacBook Pro.

No, the most controversial issue is that the MacBook Air's battery is not replaceable. There's no battery door and no way to swap a dead battery out to replace it with a fresh one—as you can with all other Apple laptops. Like an iPod or iPhone, the MacBook Air has an embedded battery, and there's no official way to remove it other than to give your laptop back to Apple and have the company replace it for a fee.

Apple's decision to eliminate the battery swap might not be quite as radical as it first seems, though. Many airlines already offer power outlets for laptops (though some plugs require Apple's $49 MagSafe Airline Adapter), and in a few years such outlets may very well be common, especially on long-haul flights. But that's little solace if you fly from Boston to Los Angeles every week in the back row of a United flight where power plugs are just a rumor.

In my 12-inch PowerBook G4 days, I used to keep a second battery around, specifically for airplane flights. But honestly, since I upgraded to the MacBook I've never even removed my battery, except to install RAM or swap out the hard drive. One reason for that is a change in my in-flight habits: I use my laptop for work when I'm on a flight, but when I take breaks to entertain myself, I switch to an iPhone or iPod. By spreading the load out over multiple devices, each with their own batteries, I can get through an entire flight.

In the end, the lack of a replacement battery may be a deal breaker for people who truly need more working time than the MacBook Air's locked-in battery provides. In my days of using the MacBook Air—for Web browsing, writing, and sending e-mail, all with Wi-Fi turned on—I found that the unit held a charge for roughly three hours total. It was an acceptable, if not impressive, amount of time.

My attempts to recharge the Air's battery took a surprisingly long time. Apple says that the behavior I witnessed doesn't really fit with any of its testing.

The MacBook Air's power adapter itself is different from the ones sold with the MacBook and MacBook Pro. The Air's slim design forced Apple to place its power connector on a curved edge on the left side of the case. The MacBook Air's connector turns at a right angle and nestles snugly in the case's curve.

Users of laptop stands will be happy to know that they probably won't have to invest in extra power adapters for the MacBook Air: my simple Road Tools Podium CoolPad raised the Air high enough off my desk so that my existing 85w MagSafe adapter connected to the MacBook Air with room to spare.

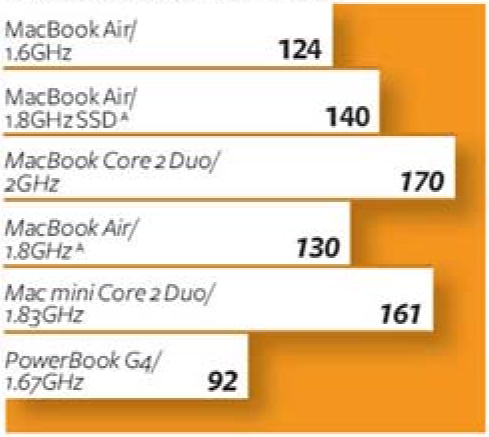
GESTURE OF SUPPORT

As is often the case with new MacBook models, the trackpad offers some new functionality.

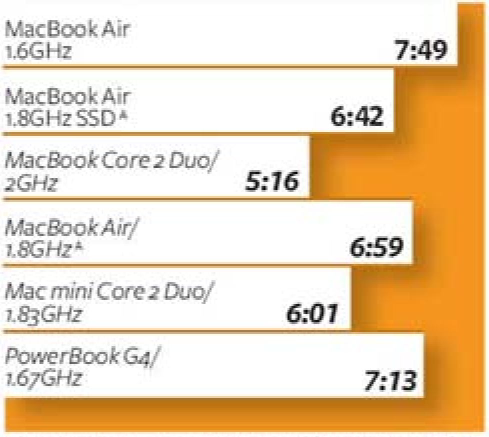
The MacBook Air supports new gestures that go way beyond the two-finger scroll and secondary click. In a move that iPhone users will recognize, the MacBook Air's trackpad understands the same pinch-and-spread finger movements that you use to zoom in and out on images and Web pages on the iPhone.

Macworld Lab Test

Speedmark 5 Test Results



Finder Zip Archive Test Results



For Speedmark scores, longer is better. For Finder scores, shorter is better, and results are in minutes:seconds. Reference systems are in italics. Speedmark 5 scores are relative to those of a 1.5GHz Core Solo Mac mini, which is assigned a score of 100. All systems were running Mac OS X 10.5.1, with 2GB of RAM. For the Finder test, we created a Zip archive in the Finder from a 2GB folder. To compare Speedmark 5 scores for various Mac systems, visit our Apple Hardware Guide (macworld.com/0815). ^A Systems are build-to-order models. —MACWORLD LAB TESTING BY BRIAN CHEN, JAMES GALBRAITH, AND JERRY JUNG

For complete benchmark test results, please visit macworld.com/ **3412**

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Power Connector The MacBook Air's power connector is placed on a curved edge on the left side of the case. It turns at a right angle and fits snugly.

On the MacBook Air, that gesture does different things depending on what program you're currently using. It'll zoom in or out on an image in Preview or iPhoto, but when your cursor is over a Finder window that's set to Icon view, the gesture has the odd effect of changing the size of all the icons.

A similar two-finger gesture—taking your index finger and thumb and rotating them left or right—cues iPhoto and Preview to rotate the selected image.

A three-finger swipe across the trackpad kicks off another action that will be familiar to iPhone users: it advances (or backs up) within a list of items. In iPhoto, swiping to the right will advance to the next image; in Safari, swiping to the left is akin to clicking on the Back button. I found swiping with the required three fingers to be ungainly at best.

THE MACBOOK AIR HAS AN EMBEDDED BATTERY, AND THERE'S NO OFFICIAL WAY TO REMOVE IT EXCEPT TO HAVE APPLE REPLACE IT FOR A FEE.

SIDEKICK OR MAINSTAY?

Some Mac users assume that Apple has intended the MacBook Air to be a sidekick to another, more powerful Mac at the true center of one's life.

But in making the MacBook Air a full-fledged MacBook and marketing it as such, Apple has given no hint that it views this system as anything more than an ultrathin version of the other MacBooks in its product line. Beyond the necessary release of Remote Disc, there's a disappointing lack of innovation from Apple in the area of easily syncing *any* MacBook with a desktop Mac.

Yes, you can employ plenty of clever strategies to improve this process, including .Mac synchronization or sync utilities such as Econ Technologies' Chronosync (macworld.com/3387). But Apple could have chosen to create software that made the MacBook Air as much of an easy-to-use companion piece to a desktop system as an iPod or an iPhone. Instead, MacBook Air users will face the same synchronization issues as every other person who uses a MacBook as a secondary system.

Then there will be those who, small drive and slow processor be damned, will adopt the MacBook Air as their primary Mac—simply because they're laptop-only users who want that laptop to be as small as possible.

For those users, the biggest issue with the MacBook Air will be the size of its hard drive. Data pack rats will need to change their file-archiving strategy, migrating certain documents to an external hard drive. Media fans might consider packing an iPod rather than storing a copy of their music and video library on the MacBook Air's drive.

MACWORLD'S BUYING ADVICE

If the story of the MacBook Air is one about compromise, then the decision of whether the MacBook Air is a product worth buying can be answered in one question: How much are you willing to compromise?

The MacBook Air is the slowest Mac in Apple's current product line, though its Intel Core 2 Duo processor is fast enough for general use. Its hard-drive capacity is limited to 80GB, and on a slow drive at that. The system has no internal optical drive, no FireWire port, and only a single USB port, which limits its external connectivity. Plus, it's more expensive than the MacBook, which bests it on almost every tech-spec measurement.

That's one side of the equation. On the other side are two criteria that many computer users would never think of as reasonable ways to judge a computer: pounds and inches rather than gigahertz and gigabytes. The MacBook Air weighs three pounds and is three-quarters of an inch at its thickest point.

Judged merely on the cold technical specifications, the MacBook Air can't measure up to Apple's other laptops. For users to whom the tech specs matter above all else, the MacBook Air will seem little more than an overpriced, underpowered toy.

But for users who factor size, weight, and—yes, I'll admit it—style into the equation, the MacBook Air begins to make more sense. Until now, Mac users who craved the smallest Mac laptop possible have had to make their own compromises, using the lower-powered MacBook.

Is losing several hundred megahertz of speed, dozens of gigabytes of hard-drive space, an internal optical drive, and FireWire connectivity worth losing two pounds?

As a longtime fan of small laptops, I embraced the MacBook Air with some trepidation. But once I slipped that three-pound laptop into my backpack and threw the bag over my shoulders, I realized that sacrificing some storage space and processor power was ultimately worth it for me.

Jason Snell is *Macworld's* editorial director.

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Robert Archer ***CE Pro magazine***

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Preview's Hidden Powers

8 things you didn't know you could do with this built-in tool

BY KIRK MCELHEARN

Apple's Preview is more than just a fast and efficient program for reading PDFs, viewing graphics, and running slide shows. The version that comes with Mac OS X 10.5 (Leopard) has some powerful features stashed away in its menus. Now you can enhance your images, annotate and merge PDFs, print multiple images on one page, and more—all without opening a specialized (and often expensive) image editor or PDF tool. Read on to discover eight great things you can do with Preview.

1. Annotate PDFs

One of the best things about Adobe's Portable Document Format (PDF) is that it allows you to share documents while making sure that everyone sees the same layout, even if the recipients don't own the software that created the document. You can create PDF files from the Print dialog box of any Mac OS X program and then send them to friends and colleagues. In the past, if you had detailed comments about the PDFs your colleagues sent you, you were stuck—you couldn't change the text, so you had to put your suggestions in another file, such as an e-mail message. Alternatively, someone in your group had to buy a copy of Adobe's $449 Acrobat Professional 8 (●●●●½; macworld.com/2460) to allow you all to add comments directly to the file.

But Leopard's Preview lets you add notes, highlight and strike through text, or use ovals and rectangles to call attention to specific sections of the page. You can even add links to other pages in a document or to Web sites. Best of all, other PDF readers—including both Mac OS X and Windows versions of Adobe Acrobat Reader—can view all of these annotations.

To begin, open any PDF in Preview and then choose Tools: Annotate. A submenu gives you four options: Add Oval, Add Rectangle, Add Note, and Add Link. Use either the oval or the rectangle shape to draw attention to specific elements on the page (see "Share Comments"). Select the one you want in the menu and then click and drag to draw. Select the shape on the page and drag it around to position it precisely, or drag one of its corners to resize it.

To add comments, choose Add Note and then click where you want the note to appear; you'll see a small yellow icon that looks like a speech bubble. Place this wherever you like. Enter your text in the yellow box that appears in the margin. To move a note's icon later, double-click on it. A dark box around the icon means that it's selected. You can then drag it to a new location.

Want to link to a Web page that explains something in more depth, or to a note or table at the end of a document? Choose Add Link and then click and drag to create a link box over the text or area you want to link to something else. (You can also select some text and then choose Add Link, to have the link applied to the selected text.) When you do this, an Inspector appears, with the Annotations tab selected. Click on the Action menu and choose either Link Within PDF if you want to link to another page in the document, or URL to link to an external Web page. To complete the link within your document, scroll to the page you want as the target and then click on Set Destination. To link to a URL, type the full address in the URL text field (including `http://`) and click on Set URL. Save and close the file, and when you reopen it, the link will be active.

One big downside to using Preview's links is that they aren't indicated in PDFs. (If you happen to pass a cursor over the spot, it will change from an arrow to a hand.) Make sure readers don't miss yours by underlining the text or highlighting the area with an oval or rectangle.

To mark up the text, select some text in the document and then choose Tools: Mark Up. (Hold down the option key

ILLUSTRATION BY OLIVER WOLFSON

while selecting, to choose text in a column.) Pick from options including Highlight Text, Strike Through Text, and Underline Text. Unfortunately, you can't replace or add text in-line (in other words, you can't replace or directly add to any part of the text). You have to indicate those changes in a note.

If you need to edit your annotations later, open the document again, choose View: Sidebar, and then, from the pop-up menu at the bottom of the sidebar, choose Annotations. Click on one of your annotations in the sidebar to make it active; you can now edit, move, or delete it. To edit links, select the Include Links option at the top of the sidebar, and click on a link to edit it in the Inspector.

2. Delete or Rearrange PDF Pages

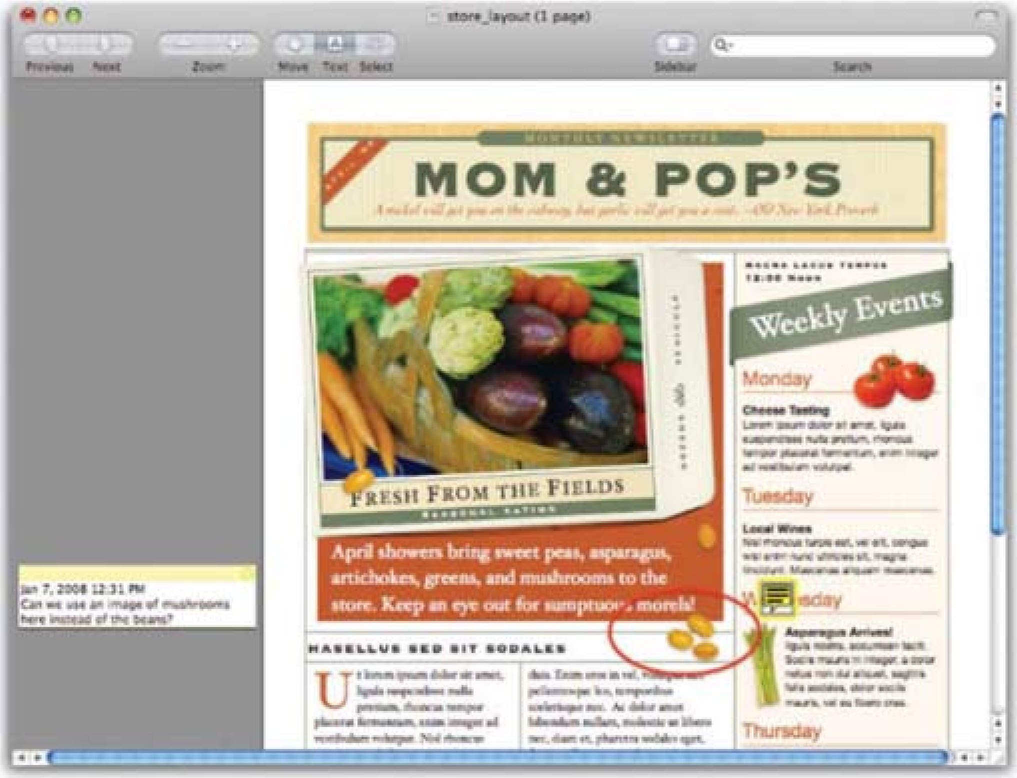
When you open a multipage PDF in Preview, you may find that you want to delete extraneous pages or change the order of pages. You can do this easily: display the sidebar if it's not visible (press ⌘-shift-D if it's not), and then select a page and press ⌘-delete. To move a page, select it and drag it to the desired location. You can even add blank pages, if you want: select the page *after* which you want to add a blank page, and then choose Edit: Insert Blank Page.

3. Merge PDFs

What if you have two PDFs, and you'd like to make a single document or move pages from one file to another? Before Leopard, you could do this only in Acrobat Professional or with a utility like MonkeyBread Software's free Combine PDFs (macworld.com/2632). Now Preview makes it a piece of cake. Open both PDFs and make sure the sidebar is visible. Drag a page from one document's sidebar to another, and drop it in the appropriate location. To add an entire document, you can drag the file's proxy icon (the icon in the title bar) to any location in the other document's sidebar.

4. Crop and Resize Images

Say you need to quickly resize or crop an image to send to a friend or post on your blog. There's no need to open an image editor—Preview's image-editing features can do the trick. To crop an image, open it and then click on the Select button in the toolbar (if you don't see a square on this button, click and hold it and choose Rectangular Selection). Click and drag to create a rectangle around the area you want to crop. You can resize this rectangle by dragging one of its corners, or you can move it if you need to. Then choose Tools: Crop or press ⌘-K. If you like what you see, save the file; if not, press ⌘-Z to go back to the original image.



Jan 7, 2008 12:31 PM
Can we use an image of mushrooms here instead of the beans?

April showers bring sweet peas, asparagus, artichokes, greens, and mushrooms to the store. Keep an eye out for sumptuous morels!

Share Comments Preview lets you mark up your documents through a variety of annotation tools, including ovals and notes, as you see here.

You can then resize your image and even change its resolution. Choose Tools: Adjust Size to enter a width or height in pixels, inches, or other units (choose the unit you want from the pop-up menu to the right of these fields). To maintain the image's proportions, make sure to select the Scale Proportionally option. To make an image smaller without losing quality, keep Resample Image selected.

5. Quickly Mask Part of Your Image

Sometimes you have a picture of a person or an object that's in front of a confusing background, and you'd really like to see that person without the clutter. Preview has two nifty features that let you do this—Instant Alpha and Extract Shape. To use the first, open a picture and then click and hold the Select button in Preview's toolbar. From the menu that appears, choose Instant Alpha. Next, click and drag to remove background areas of the image. Start by dragging small areas to see how Preview expands the selection. You don't have to get everything in one pass—just click and drag again to add to your selection. If you make a mistake, press the escape key to remove the selection altogether or option-drag to deselect particular areas. When you've highlighted everything you want to remove, press return to crop the background from your picture.

Using Extract Shape is even easier. Choose it from the Select button menu, and then start drawing a line around the item you want to retain in your picture. As you do this, a thick red line follows your cursor. Make sure to draw entirely around the item you want to keep; continue until you've joined the beginning and end of your line. You'll then see a number of handles on the line. Move any of these if you need to improve part of your outline. Don't worry about drawing perfectly. The magic starts when you press return—Preview calculates what to keep, and removes your picture's background. In many cases, you'll be able to crop out

CHECK IT OUT

Soup Up the New Safari

Apple's Safari 3 includes many helpful features, such as resizable text fields and a new search feature that highlights every instance of a search term. But still, a few choice add-ons can make it a better browser. These are some of my favorites:

Videobox Tasty Apps' $8 Videobox 2.5 (www.tastyapps.com), formerly known as the FLVR plug-in for Safari (★★★★½; macworld.com/3284), is a very handy tool for downloading Flash video and converting it to QuickTime format. With that done, you can view the video on your Mac, within iTunes, or on your iPhone or iPod. Just launch Videobox and navigate to a Web page that includes a Flash video. If the video is compatible with Videobox (YouTube and Google Videos are compatible; Hulu is not), it will appear in the Videobox window, ready to be downloaded and converted.

Web Snapper Tired of wasting paper trying to print Web pages? Then take a look at another Tasty Apps program—the $8 Web Snapper 2.1, formerly known as Red Snapper (★★★½; macworld.com/3285). It can capture an entire Web page as a scalable PDF file (complete with live links) or in any graphic file format supported by Mac OS X (JPEG, TIFF, PICT, and PNG, for example).

Saft I try not to surf without Hao Li's $12 Saft (macworld.com/0075). So I was happy to see a Tiger-compatible version (9.0.2) appear quickly. Saft does a boatload of useful things, including bookmark searching, blocking animation and images, and providing a way to create typed shortcuts that let you quickly move to favorite Web addresses. (For example, assign the shortcut *mw* to Macworld.com. When you want to quickly visit that Web site, simply type *mw* followed by a space.)—CHRISTOPHER BREEN

all the dreck the first time, though with some pictures you may need to repeat the process a couple of times.

6. Adjust Image Color and More

Programs such as Apple's iPhoto offer tools to adjust image color, brightness, and exposure, but what if you simply want to adjust a single image without adding it to your iPhoto library, or you don't have the iLife suite. Open the image in Preview and then choose Tools: Adjust Color. The tools in this palette let you tweak your picture's color balance and brightness and even add a sepia tone to it (see "Adjust Colors"). Move the different sliders to see, in real time, what your picture will look like if you save your changes. For pictures that are too dark or overexposed, try clicking on the Auto Levels button to see if that fixes them.

7. Print Multiple Images per Page

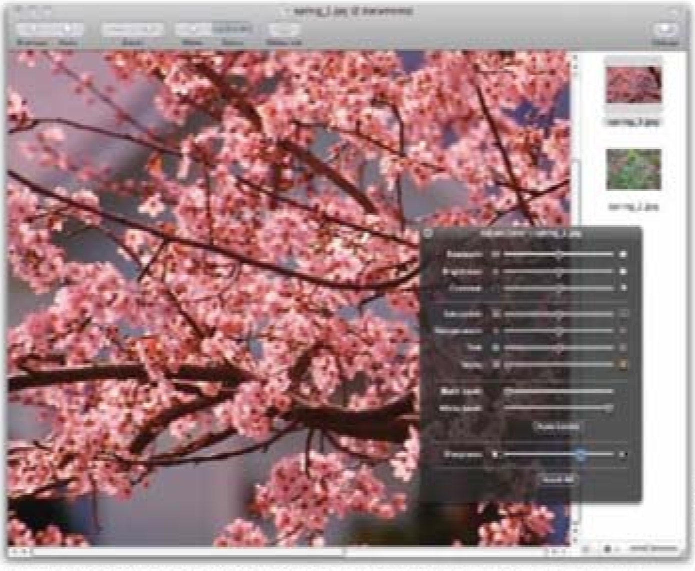
It's a shame to waste a lot of paper printing a handful of images one to a page. While many programs let you print a bunch of images on a page, they typically require multiple steps to do so. Preview has a printing trick that does it automatically. First, put all your images in a single Preview window. If you already have one image open, display Preview's sidebar and then drag the other images from the Finder to the sidebar. If you don't have any images open, you can open them at once by dragging them all onto Preview's icon in the Dock or in the Finder. Next, select all the images in the sidebar by clicking on one and then pressing ⌘-A. Now choose File: Print Selected Images, or press ⌘-P. In the dialog box that appears, choose the number of images you want on each page from the Images Per Page pop-up menu. (Don't see this? Reveal more options by clicking on the disclosure triangle to the right of your printer's name.) You can choose to have multiple copies of each image if you check the Print *N* Copies Per Page option; otherwise, each image is printed once.

8. Add Keywords to Your Images or PDFs

Spotlight keywords make it possible for you to find certain files easily by using a special keyword that other files won't contain. For example, if you add the keyword `REPVOLC` to that report you are writing about volcanoes, Spotlight will find it instantly.

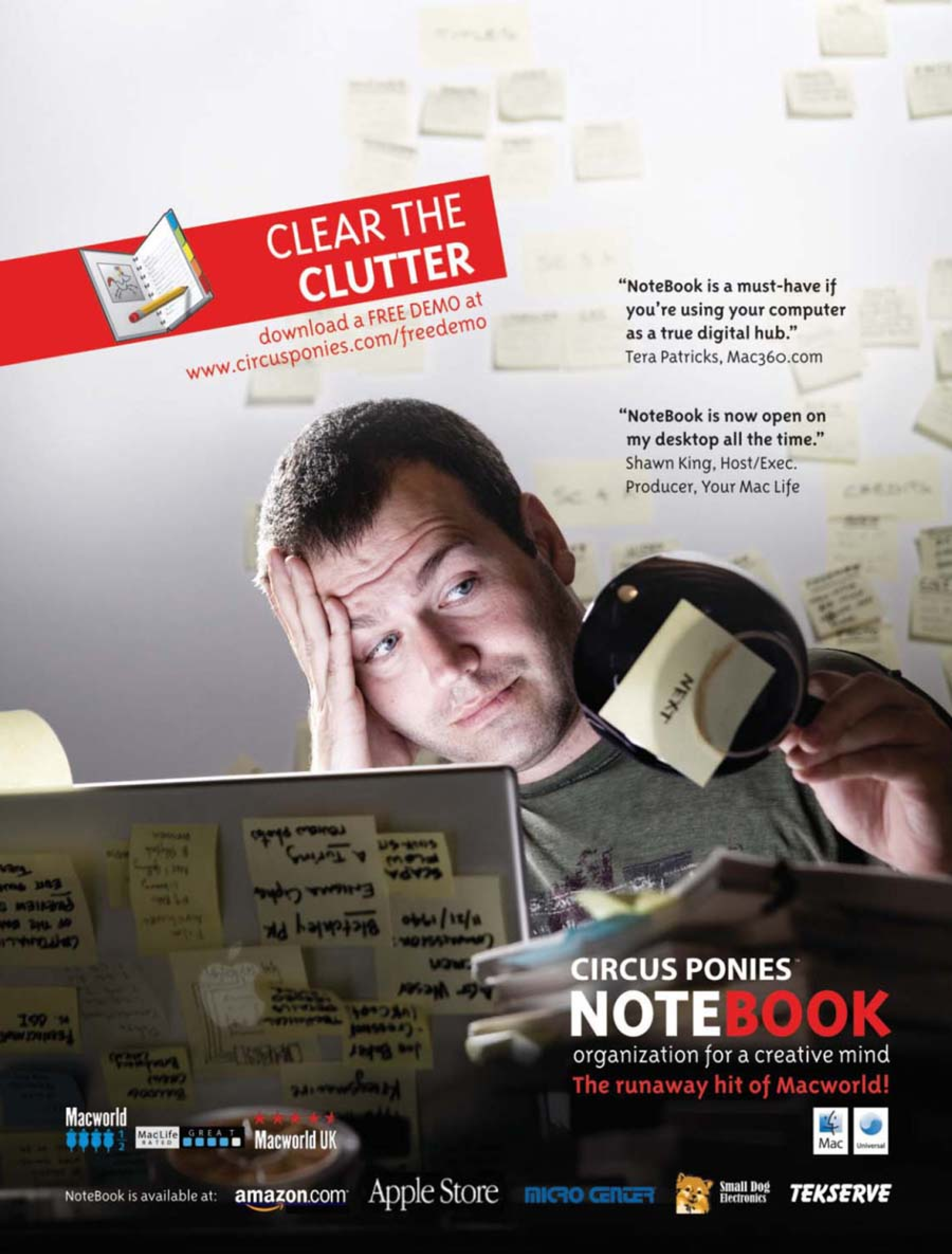
You can add Spotlight comments to any file by selecting it in the Finder, pressing ⌘-I, and typing in the Spotlight Comments field. But if you send files by e-mail or iChat, or even just transfer them over a network, comments added in this way disappear. To add keywords *permanently* in Preview, open the file and select Tools: Inspector (or press ⌘-I). In the palette that appears, click on the Spotlight tab. Click on the plus sign (+) to add a new keyword, and then type your text. You can add as many keywords as you want. (Note that this doesn't work for images in PNG format.) When you're done, save the file. Now these keywords will stay put, no matter where the file travels. You'll find them in the Finder's Info palette (⌘-I) in the More Info section, listed under Keywords. ☒

Kirk McElhearn writes about a lot more than simply Macs. Visit his blog, Kirkville (www.mcelhearn.com).



Adjust Colors Don't bother opening an image editor when you need to make a few enhancements to your picture. Preview's Adjust Color palette lets you tweak colors, brightness, and more.

ICON BY PAUL HOWALT



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Make iMovie '08 Work Your Way

Regain lost iMovie HD 6 features **BY JEFF CARLSON**

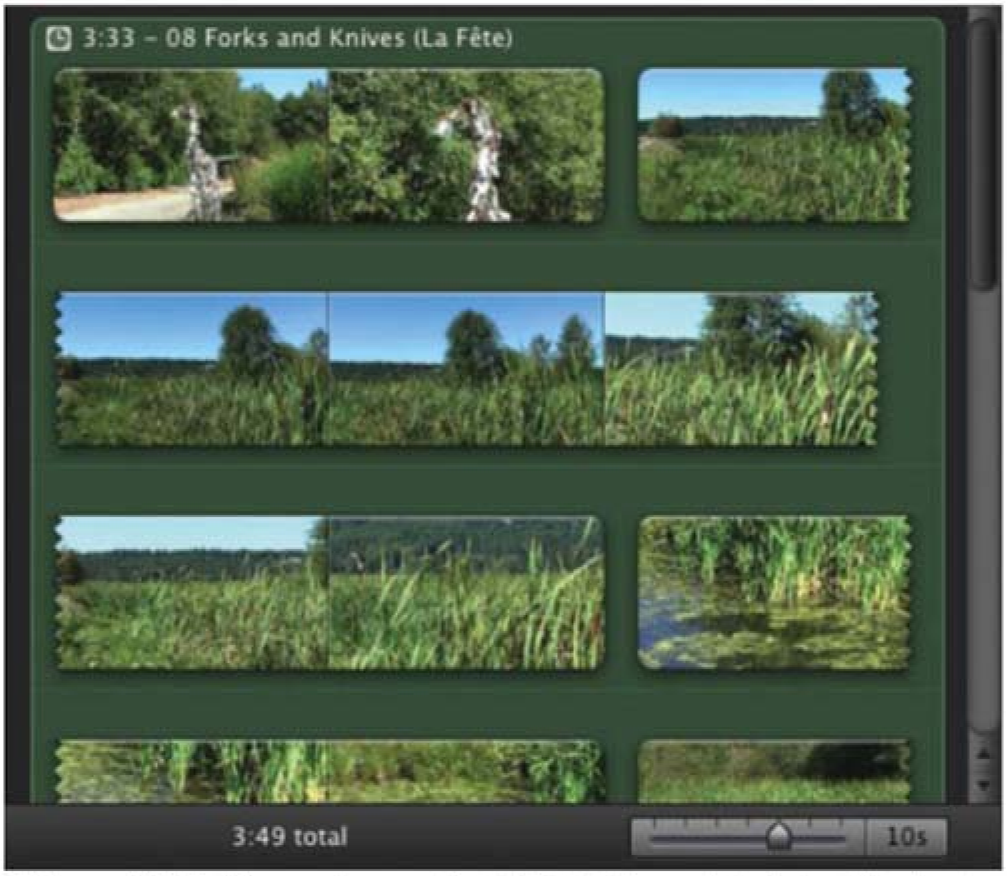
When Apple introduced iMovie '08, the program received more attention for what it was missing than for what it offered. It represented a complete rewrite of the iLife suite's previous video-editing component, iMovie HD 6. The new version abandoned the old code, along with many features that iMovie users had grown accustomed to. Although iMovie HD 6 still works, and is available for free to people with iLife '08 installed, jumping between the two programs is a hassle.

Despite iMovie '08's seemingly missing features, the program has hidden depth. It can still perform some of its predecessor's tricks—just not in obvious ways. And a subsequent update, version 7.1, adds other enhancements. Here's how to get the most out of the software.

Work with Multiple Audio Tracks

One of iMovie '08's major departures is the lack of a timeline. In all previous versions of the software—not to mention in Final Cut Express, Final Cut Pro, Avid Xpress, and nearly every other video editor out there—video tracks appear on a single horizontal timeline, with separate audio tracks below the video.

In iMovie '08, you instead build your movie in the Project Browser that resides in the upper left corner. Video clips appear as a continuous filmstrip, running over to the next line as if the movie were a paragraph of text. At first glance, there appears to be no place to insert additional audio, such as music or sound effects, but that's only because iMovie doesn't display an empty place for them. (As with previous versions, the audio that accompanies the video is embedded in the video clips; iMovie hasn't actually removed any audio.)



Background Music When you drag a song file to the Project Browser but don't drop it directly onto the filmstrip, it appears as a green box behind the entire filmstrip, serving as background music.

Somewhat confusing, though, is the distinction that iMovie makes between background music and other audio. When you drag a song from the Music And Sound Effects Browser (press ⌘-1 or click on the musical-note icon in the middle right to view it) to an area of the Project Browser other than the filmstrip itself, the song appears as a green box behind the video. When you play the movie, the music plays in the background, unanchored to any particular bit of the video footage (see "Background Music"). If, however, you drag an audio file and drop it onto a portion of the filmstrip, the audio appears as a green horizontal bar below the video and remains locked to that footage as you edit.

If you were working in iMovie HD 6, those would be the only two audio tracks you could effectively work with. In iMovie '08, however, you can keep adding audio to the filmstrip to create as many overlapping audio tracks as you can tolerate before your ears start to ring. (iMovie HD can technically overlap audio clips, but it crams them all onto the two tracks, making them hard to manage—and you can still only work with two tracks at a time.)

Extract Audio Clips

It can be helpful to pull the audio out of a video clip to edit it separately, or to use it as background audio for a different video clip. Although iMovie '08 can do these things, the process is rather unintuitive.

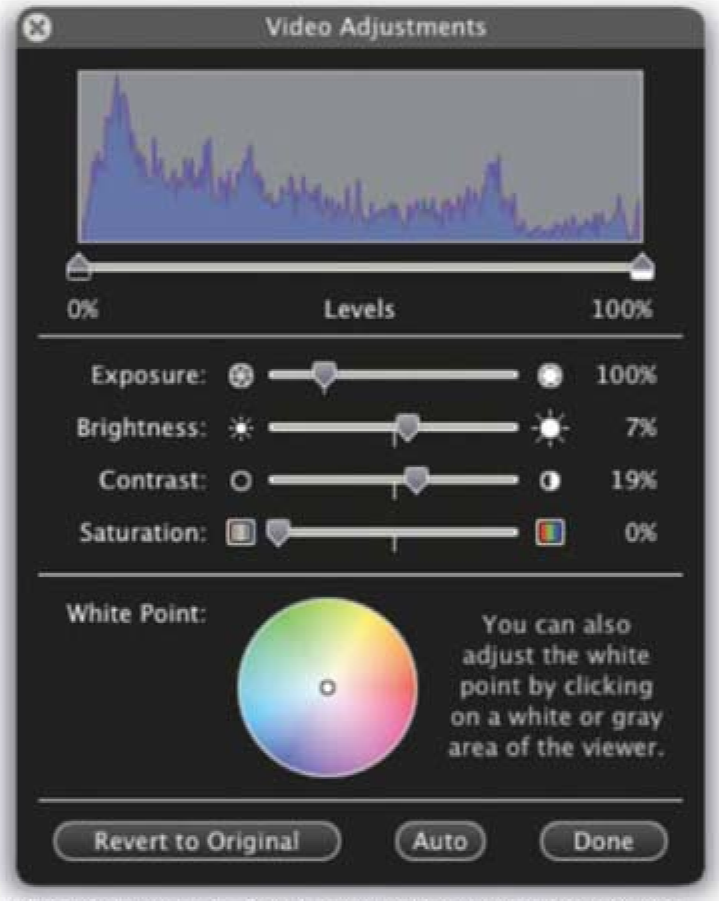
In the Project Browser, click and drag to select a range of frames from which you want to extract audio. Control-click (or right-click) on the selection and choose Reveal In Event Browser from the contextual menu that appears. You'll then see those frames selected in gray in the Event Browser at the bottom of the screen. (Unlike iMovie HD, iMovie '08 adds only a *copy* of the clip to the movie—the source footage remains in the Event Library.)

Hold down ⌘-shift and drag the selection from the Event Browser to the filmstrip in the Project Browser. Instead of inserting the selected video (which would duplicate the video already in the project), this action inserts just the audio portion of the clip as an audio track below the filmstrip. To mute the video's embedded audio track, click on the Audio Adjustments button in the clip's icon (it looks like a small speaker) and set the Volume slider to zero. You can then edit the video and audio independently.

Trim Smarter

The signature new feature in the original iMovie HD was Direct Trimming: To edit the length of a clip, all you had to do was click on its start or end and then drag to hide or reveal the frames you wanted to edit. You no longer needed to splice and dice your clips in order to alter their length.

In iMovie '08, you can keep adding audio to the filmstrip to create as many overlapping audio tracks as you can tolerate.



Exposure: 100%
Brightness: 7%
Contrast: 19%
Saturation: 0%

You can also adjust the white point by clicking on a white or gray area of the viewer.

Video Adjustments Convert a video to black and white by setting the saturation to zero.

The initial version of iMovie '08 abandoned Direct Trimming, offering a trio of options in its place. You could select a range of frames and trim away the excess; open the clip in a special *trimmer* mode; or click on a button to slice off a second of footage. Apple's iMovie '08 7.1 update brings a more sensible approach to trimming.

In iMovie's preferences, you can now enable the Show Fine Tuning Buttons option; clicking on a button displays an orange border that lets you trim in one-frame increments up to one second in length.

Or you can hold down ⌘-option and position the cursor over the edge of the clip to display the Fine Tuning border.

A third method is to hold down the option key and position the cursor at the edge of a clip, and then press the left- or right-arrow key repeatedly to trim in one-frame increments.

Resurrect Magic iMovie

The Magic iMovie feature in iMovie HD 6 was a great way to throw together a bunch of footage that didn't require much editing but needed a little polish, or that you wanted to use as a jumping-off point for your edits. Magic iMovie may have vanished in iMovie '08, but most of its capabilities are still there.

After connecting a camcorder to your Mac, go to the Camera Import window (⌘-I) and set the mode switch to Automatic. When you click on the Import button, iMovie rewinds the tape in your camcorder and captures all the footage; for tapeless camcorders, iMovie imports the entire contents of the camera's memory.

If you want iMovie to apply transitions between all the clips, go to the Project Properties window (File: Project Properties or ⌘-J). In the Transitions section, select Add Automatically, choose a transition type from the pop-up menu, and use the Transition Duration slider to set the lengths. Click on OK.

iMovie will then ask whether you want the transitions to overlap existing visible footage (which was iMovie HD's behavior) or to use hidden trimmed footage. When you click on OK, iMovie adds the transitions—and since iMovie '08 doesn't need to render them, they're ready immediately.

Make DVD Chapter Markers

The most surprising omission in iMovie '08 is that it doesn't offer a way to set markers, which iDVD can use to create chapters within your movie. (Perhaps this omission is not so surprising, considering Apple's current lack of interest in the DVD format).

The workaround is to take a side trip through either GarageBand (the more straightforward option) or iMovie HD 6 (which offers more control over marker placement). In iMovie '08, edit your movie to the point where you're ready to send it to iDVD. Then share it via the Media Browser (Share: Media Browser) at the Large size, making it available to other iLife programs.

If you want to use GarageBand, launch it and select Create A New Music Project. Go to the Movies tab in GarageBand's Media Browser, select your iMovie proj-

iMovie '08's New Tricks

iMovie '08 has a number of new features that older versions required third-party plug-ins or workarounds to accomplish. Here are a few.

Crop and Rotate Clips

Have you ever inadvertently turned your camcorder sideways like a still camera to record a tall object like a building or waterfall? On video, that footage shows up at a 90-degree angle, looking as if you were knocked over when you shot it.

iMovie '08 can put you back on your feet by rotating the footage to the proper orientation, although the process is not as simple as rotating a still-camera image. Select the clip you want to rotate, and click on the crop button that appears in the upper right corner of the clip; or click on iMovie's Crop button on the toolbar and then select the clip. In the Viewer window, click on one of the rotate buttons to tilt the footage in 90-degree increments. Unless you want the image to appear with black bars along the sides because of the incorrect aspect ratio, click on the Crop button and specify which portion of the clip to make visible.

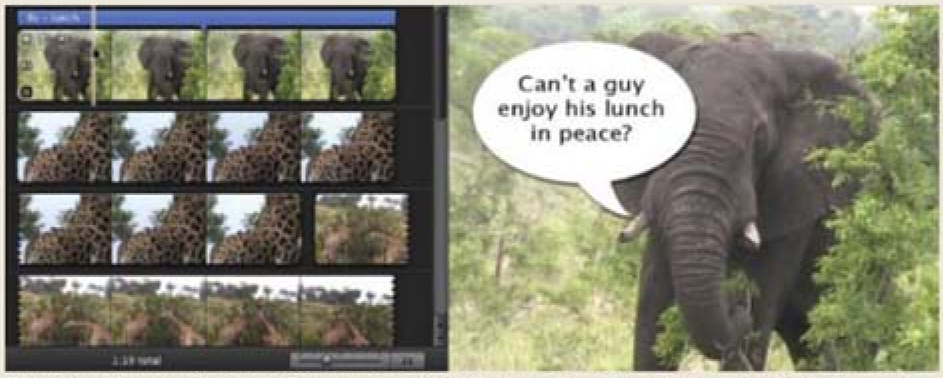
The Crop button also lets you zoom in on any portion of your video (for instance, to cut out distracting material at the edges). The final image quality will depend on the resolution of your video, however, and will always be somewhat worse than what you started with—so try to shoot what you'll want in the end.

Add a Photo as an Overlay or Mask

When you add a still photo to a movie, it normally appears in the filmstrip mixed in with your video clips. However, you can also overlay a photo on video without slicing up the video clip to insert the photo. Here's how.

You drag an image from the Photos Browser, but instead of dropping it between video clips in the filmstrip, you drag it directly onto a clip. The clip will turn blue and highlight the beginning, the end, or the entire clip, depending on where the cursor is. When you release the mouse button, the photo appears as a blue bar above the filmstrip (the same representation as for a title).

To try out this feature, create a picture in your favorite image editor with areas set to transparent, and save it in a format such as PNG that retains the transparency. For example, you could create a thought balloon on a transparent background (see "Overlay"). When you add the picture to your movie by dragging it onto a clip, it will retain the transparency, revealing only the thought bubble.



Overlay You can import an image containing a transparent background and overlay it on existing footage—to create a speech bubble, for example.

ect, and drag the large version to GarageBand's main work area. Next, position the playhead at a spot where you want a chapter marker to appear, and press the P key to add a marker (or choose Edit: Add Marker). Create a marker for each remaining chapter, and then name the chapters if you want something more descriptive than Chapter 1, Chapter 2, and so on. When you're done, choose Share: Send Movie To iDVD to create a new iDVD project for the movie.

If you prefer to use iMovie HD 6 to create markers, then, in iMovie '08, choose Share: Export Movie and select the Large setting. You can import the resulting movie file into iMovie HD 6, where you can add and name iDVD chapter markers, and then send the movie to iDVD.

Apply (a Few) Effects

iMovie '08 dramatically scales back the number of options available for applying titles and transitions, and completely removes the effects (as well as support for third-party plug-ins). However, a few things that iMovie HD 6 included as effects now show up as *video adjustments*.

For example, although there's no one-click option for making your video black and white, draining the color achieves the same result, and is almost as easy. Click on the Adjust Video button to bring up the floating Video Adjustments window, and select a clip to adjust. Then drag the Saturation slider left, to zero percent (see "Video Adjustments").

In the same window, you can tweak the colors with more flexibility than the Adjust Colors effect of old allowed, even adjusting the image's white point to compensate for color cast. (Or you can go crazy with the sliders and create your own pop art.)

Look toward the Future

The dramatic changes in iMovie '08 threw a lot of people for a loop, leading to some serious head-scratching. The program is still missing plenty of features, such as better volume control and a way to adjust a clip's speed (it's hard to believe a slow-motion capability didn't make the cut). But iMovie '08 isn't as hobbled as it first appeared, which bodes well for future versions. And if you find its limitations too restrictive, you can use iMovie HD 6 instead—at least until it stops working, since Apple has given up on supporting it.

Apple has made iMovie HD 6 available as a free download for people who install the iLife '08 suite—you can get it at macworld.com/3602. ⊠

Jeff Carlson is the author of *iMovie '08 and iDVD '08 for Mac OS X: Visual QuickStart Guide* (Peachpit Press, 2008) and the managing editor of TidBits (www.tidbits.com).

Understand the Fun and Beauty in Mathematical Concepts

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© Masterfile

Dr. Benjamin assumes you have no more than a distant memory of high school math. He believes that it is his job to fan those embers into a burning interest in the subject he loves so much—and in which he takes such exquisite joy.

About Your Professor

Arthur T. Benjamin is Professor of Mathematics at Harvey Mudd College, where he has taught since 1989. He earned a Ph.D. in Mathematical Sciences from Johns Hopkins University. The Mathematical Association of America honored him with national awards for distinguished teaching in 1999 and 2000 and named him the George Pólya Lecturer for 2006–08.

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8. The Joy of Algebra Made Visual
9. The Joy of 9
10. The Joy of Proofs
11. The Joy of Geometry
12. The Joy of Pi
13. The Joy of Trigonometry
14. The Joy of the Imaginary Number *i*
15. The Joy of the Number *e*
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Take Advantage of Face Detection

Even older cameras can put these photo principles to work **BY DERRICK STORY**

We love photographing people. But our cameras aren't always cooperative. They focus on the bricks in the background instead of on handsome Uncle Ted, or they set off a blinding flash that washes out playful party pictures. This sad situation hasn't gone unnoticed by the engineers who design digital cameras—which is why many of the newer cameras on the market include a new technology called *face detection*.

With this mode turned on, your camera locates the people in a shot and then fine-tunes the focus and exposure for those faces. While this may sound like a superficial gimmick, I've found that it works surprisingly well—it can greatly increase your chances of getting good shots at a wedding or family reunion. But even if your current camera doesn't offer face detection, you can become a better photographer by embracing its concepts. Once you understand how face detection works, you can enable many of the same features on practically any camera.

Using Face Detection With face detection turned on, the camera highlights faces on the LCD screen and then sets the focus and exposure for the subject.

The Secrets of Face Detection

If you have a new compact camera, take a peek at its specifications to see if it offers a face-detection setting. Typically, this option is in a camera's autofocus (AF) menu. Face detection is particularly handy for candid shots, when you're working quickly and are therefore more vulnerable to misfocused shots. It's also a boon for flash photography. With face detection turned on, the flash doesn't try to illuminate the whole room, just the people within range—cutting down on the nuclear blast effect.

Using the face-detection feature is fairly simple. As you compose your shot, your camera highlights the faces on the LCD screen and then gives you the green light to shoot. If the camera isn't finding the person in your shot, the problem may be that it can't see enough of his or her face. Face detection is much more effective when the camera can see both eyes of the subject; its accuracy diminishes greatly with profile shots. Also keep in mind that although face detection is fast, it isn't instantaneous. For best results, compose your scene and then press the shutter button down halfway to activate face detection—this will give the camera time to adjust its settings appropriately. Once the camera shows that it has identified the subjects in your composition, press the shutter button down the rest of the way to make a perfect exposure.

Face detection is so simple that you may be tempted to leave it on all the time. But as with any setting, it's not right for every situation. When photographing sporting events and landscapes, for example, you'll probably get better results by switching to one of your camera's other focusing settings (see "Other Types of Autofocus"). I recommend reserving face detection for family gatherings, weddings, and other people-oriented events.

DIY Face Detection

Although face-detection technology makes photographing people easier, you can get similar results without it. The trick is knowing how to adjust your camera's settings to emulate what face detection does.

Proper Focus You tried to get a shot of Aunt Jane having an animated conversation with Uncle Ted, but your camera focused on the fireplace between them instead. That's because your camera likes distinctive lines, especially when they appear in the center of the frame. With face detection turned on, your camera is able to detect Aunt Jane and focus on her—not the columns of bricks behind her. If you don't have face detection, you can better control your camera's focus by following a few simple steps.

For starters, switch to single-shot AF. This setting is usually found in a camera's AF menu. Point the camera directly at the person you want to focus on so that he or she is in the middle of the frame, press the shutter button down halfway to lock in the focus, and then recompose the shot and press the shutter button the rest of the way. Photographers have been using this tried-and-true method (called *focus locking*) for years.

The problem with focus locking is that you can miss a good expression while you're recomposing the shot. If you're in good lighting and don't need a flash, you can partially compensate for this by enabling your camera's burst mode (sometimes labeled as Continuous in the drive-options menu and depicted as a stack of photos). Start by turning off the flash. If your subject isn't in direct sunlight, make sure the ISO is set to 200 or 400 to better handle lighting and then switch to burst mode. Now lock the focus as before, but this time keep the shutter button pressed down to take a series of shots. Your odds of getting a natural expression will increase dramatically. (Unfortunately, this rapid-fire mode won't work in dim settings, where you need to turn the flash on. Flashes often take a few seconds to recycle, which means that a flash will go off only every fourth or fifth frame in burst mode.)

Even if your camera doesn't offer face detection, you can become a better photographer by embracing its concepts.

Better Flash Exposures Shooting with the flash on most compact cameras can be challenging. The built-in flash tends to overexpose people, making them look as though they're being interrogated under a floodlight. The beauty of face detection is that the camera knows what part of the image you care about and tries to adjust the flash for the correct exposure. But even cameras that don't offer face detection often have other modes that are helpful in these situations.

First, check your camera's scene modes for settings that might help. Many cameras include presets such as Party, Indoor, Night Snapshot, and others that are designed to help you get interesting portraits with your flash—even in challenging lighting conditions. When you pick a scene mode, your camera gets a better idea of what you're trying to do. For example, if you pick the Party mode, the camera knows that you want good people pictures and that you aren't out in the wilderness shooting rocks.

If your flash still overexposes your subjects, find its flash compensation setting. This usually looks like a scale that goes in this sequence: –2, –1, 0, +1, and +2. Try setting the scale to –1. This tells the camera that no matter how much light it thinks it should use for a picture, it should use a little less. Picture still too bright? Then try –2.

Some cameras also include a nifty Flash Exposure Lock (FE Lock) feature. This lets you tell the camera what the most important aspect of the scene is and then provides just enough flash to illuminate it. To use FE Lock, make sure your flash is on, and then focus on the subject that is most important to you and press the shutter button down halfway. While still holding down the shutter button, press the FE Lock button (usually it's nearby). The flash will send off a test firing to set the proper exposure. Once it does, press the shutter button down the rest of the way for the final exposure. You should get much better results.

Derrick Story is the author of *The Digital Photography Companion* (O'Reilly Media, 2008). His weekly photography podcast is available at www.thedigitalstory.com and on iTunes.

Other Types of Autofocus

Face detection is great for grabbing candid shots, but it isn't the perfect choice for other types of photography. Here's a quick refresher course on your camera's autofocus (AF) modes.

Single-Shot AF This mode tells your camera to focus either on whatever is placed at the center of the scene or on one of the other focusing points that you've manually selected. This is particularly useful, for example, when you're shooting landscapes and want to focus on a particular part of the scene. Without your telling it, the camera won't know if you want the rock in the foreground or the tree in the distance to be the primary subject. Once you've pressed the shutter button down halfway to lock the focus on your area of interest, you can reframe the scene before taking the shot.

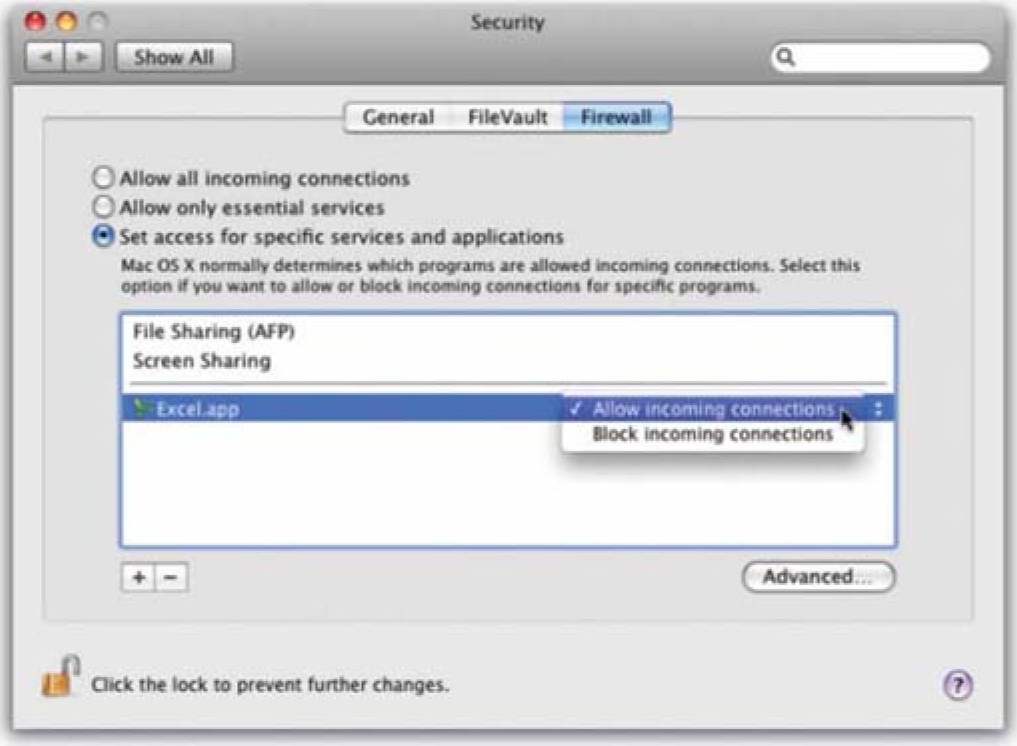
Action AF When you're photographing sports and fast-moving subjects, Action AF (sometimes referred to as Full-Time AF) is often the best choice. In this mode, the camera searches for moving objects and continually adjusts its focus for them.

Specialty Modes Some camera companies offer additional variations on these focusing approaches. Many Canon cameras, for example, have AiAF (Artificial Intelligence Autofocus). In this mode, the camera uses five or more focusing "zones" to analyze the scene. It automatically picks the zone where it determines that the subject is located and focuses accordingly. AiAF is different from face detection because the subject can be anything—a person, a tree, a stack of dishes. It works remarkably well but doesn't always detect people. Invest a few minutes in reading your camera's manual to learn what each of its modes does, and your photography is sure to improve.

PHOTOGRAPH BY PETER BELANGER

Close the Ports

How to configure Leopard's firewall **BY RICH MOGULL**



○ Allow all incoming connections
○ Allow only essential services
● Set access for specific services and applications
Mac OS X normally determines which programs are allowed incoming connections. Select this option if you want to allow or block incoming connections for specific programs.

File Sharing (AFP)
Screen Sharing
Excel.app ✓ Allow incoming connections
Block incoming connections

Set Firewall Options By selecting the Set Access For Specific Services And Applications option, you can control incoming network traffic.

There are two schools of thought when it comes to the software firewall built into OS X.

One school says that it's not necessary. Firewalls prevent unapproved connections from opening ports on a computer's network interface. (Ports are how a software service talks to a network. You can think of a port as a window in a wall; some ports are left open on purpose to allow incoming and outgoing data traffic.) But by default, OS X doesn't leave many ports open. In contrast, most versions of Windows ship with a bunch of open ports, which is one reason that operating system is a riper target for malicious hackers. And while Leopard leaves open more ports than earlier versions of Mac OS X, so far there have been no known attacks on those default services.

The other school (to which I belong) says that the best security mantra is "never assume." As you install and use programs on your system, you often open ports without realizing it. And there's always the possibility that a chink in OS X's armor will lead to a wave of new exploits. That's why I recommend that all Mac users turn on OS X's built-in firewall.

The problem is that, while OS X has long included basic firewall software, Leopard introduced some significant changes to it, leaving many Leopard users confused as to how to keep their Macs secure. But though the firewall interface in Mac OS X 10.5 is indeed quite different from that in earlier versions of the OS, it's still relatively easy to use, especially since the release of the 10.5.1 update.

What's New

In previous editions of OS X, you configured the firewall in the Sharing preference pane. In Leopard, you do it in the Security pane.

That's not the only change. Instead of the Start/Stop button found in those earlier incarnations, the firewall in the initial release of Leopard gave you three options: Allow All Incoming Connections, Block All Incoming Connections, and Set Access For Specific Services And Applications.

Those options confused many users. For one thing, the terminology was vague. Also, the Block All Incoming Connections option actually left a number of ports open, including any service running as the root user; none of those open services were shown in the user interface.

The firewall also broke some programs, such as Skype, that change their internal code when they run. The reason is that the firewall creates a digital signature for each program that tries to communicate across the network interface. That signature enables OS X to know if the program's code has been modified; if it has, OS X will refuse to run it. Such modified programs would bounce on the Dock a few times, and then shut down.

OS X 10.5.1 remedied these flaws by changing that second option to Allow Only Essential Services, tightening and documenting which essential services are allowed, and prompting users to reactivate programs (like Skype) that change themselves, instead of simply breaking them.

Configuring the Firewall

Leopard's Allow All Incoming Connections option is the functional equivalent of the old Stop button: it turns your firewall off. I wouldn't recommend this setting to anyone.

The Allow Only Essential Services option will block anything except a few default networking services, such as Bonjour. It prevents file sharing, remote access, and other optional services. You should use this option only if you really want to block everything. I use this option when I'm on potentially hostile networks, such as those in hotels or public hotspots, and don't want to bother with manually turning off all my shared services (see "Firewalls on the Road").

Firewalls on the Road

While it's nice to have the OS X firewall running when you're at home and have your Mac sitting safely behind a router, enabling it becomes absolutely mandatory when you take your Mac on the road.

Even the most basic home or office router, like the AirPort Extreme, uses Network Address Translation (NAT) to hide your computers from being directly accessed over the Internet. NAT allows a single router to connect hundreds of individual computers to the Internet through one public address. A side benefit of a NAT router is that it serves as a basic, yet effective, hardware firewall.

But it can't protect you when you hit the road and leave it behind, especially if you've configured your Mac's firewall loosely. On one recent business trip, for example, I connected to my hotel's network and was surprised to see three shared Macs in my Finder sidebar; in iTunes, I saw two shared libraries. All were listed under their owners' names. A less-than-law-abiding person could have tried connecting to those systems to run attack tools or force their way past weak passwords.

For that reason, you should switch your Leopard firewall to Allow Only Essential Services and enable Stealth mode when you travel. It's an easy way to avoid exposing yourself to attacks; when you return home, you can switch back to Set Access For Specific Services And Applications, and the firewall will restore your original settings.

The third option, Set Access For Specific Services And Applications, is the one I recommend for everyday use. It's actually a new kind of firewall for OS X. It's what's known as an *application* firewall. Previous versions of OS X used a technology known as *stateful packet inspection*—a fancy way of saying the firewall blocked ports that weren't being held open for use by approved applications. An application firewall like the one in Leopard blocks traffic targeting specific applications, not specific ports.

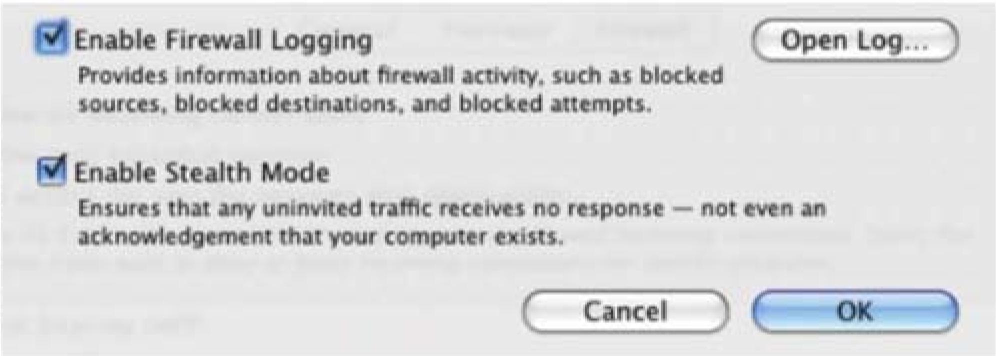
(Leopard still includes a stateful-packet-inspection firewall, called ipfw, but by default it's set to let all traffic through. That firewall can be configured to be more secure, but doing so is for advanced users only; if you don't know how to do it already, you probably shouldn't attempt it at this time.)

In the Firewall configuration tab, below the three options, you should see a list of network services that are currently authorized to accept or deny incoming connections. If you've enabled any services in the Sharing preference pane, they should appear here; you can't disable them from the firewall.

After you select the Set Access For Specific Services And Applications option, any time you launch a program that uses networking, Leopard will ask if you want to allow or block incoming connections to it. If you select Allow, that program will be added to this list and digitally signed (if it isn't already) so Mac OS X can detect if it's been tampered with. You can select an application in this list, and allow or deny incoming connections using a drop-down menu.

The Leopard firewall doesn't prevent programs from making outgoing connections. So, for example, it might be fine to set iTunes to share music from your laptop when you're at home. But if you then move to a public network, the only way to block access to your iTunes library is to turn sharing off in iTunes' preferences (or to adjust the firewall to Allow Only Essential Services).

Whether you choose Allow Only Essential Services or Set Access for Specific Services And Applications, you should then click on Advanced and select Enable Stealth Mode. This hides closed services from someone probing your computer, which adds a little extra security. It's akin to bricking over a door instead of just locking it.



☑ Enable Firewall Logging

Provides information about firewall activity, such as blocked sources, blocked destinations, and blocked attempts.

☑ Enable Stealth Mode

Ensures that any uninvited traffic receives no response — not even an acknowledgement that your computer exists.

Stealth Mode Turning on Stealth Mode hides your Mac from someone probing your computer.

PHOTOGRAPH COURTESY OF APPLE

The Future of the Firewall

Because the firewall in OS X is now application-based, there's some concern in the security community that it will leave the Mac vulnerable to low-level attacks. Apple may need to address this in future security updates or by adding some kind of graphical-interface tool that'll let you configure ipfw.

It would also be good to have some way to configure the application firewall to block outbound connections. We already know about the QuickTime rtsp vulnerability: it would, in theory, allow an attacker to embed a QuickTime link in an e-mail or Web page directing you to a hostile site in order to exploit your computer. With the QuickTime 7.3.1 update, Apple plugged that hole. But I think Apple needs to give us some kind of tool for blocking outgoing connections across all applications.

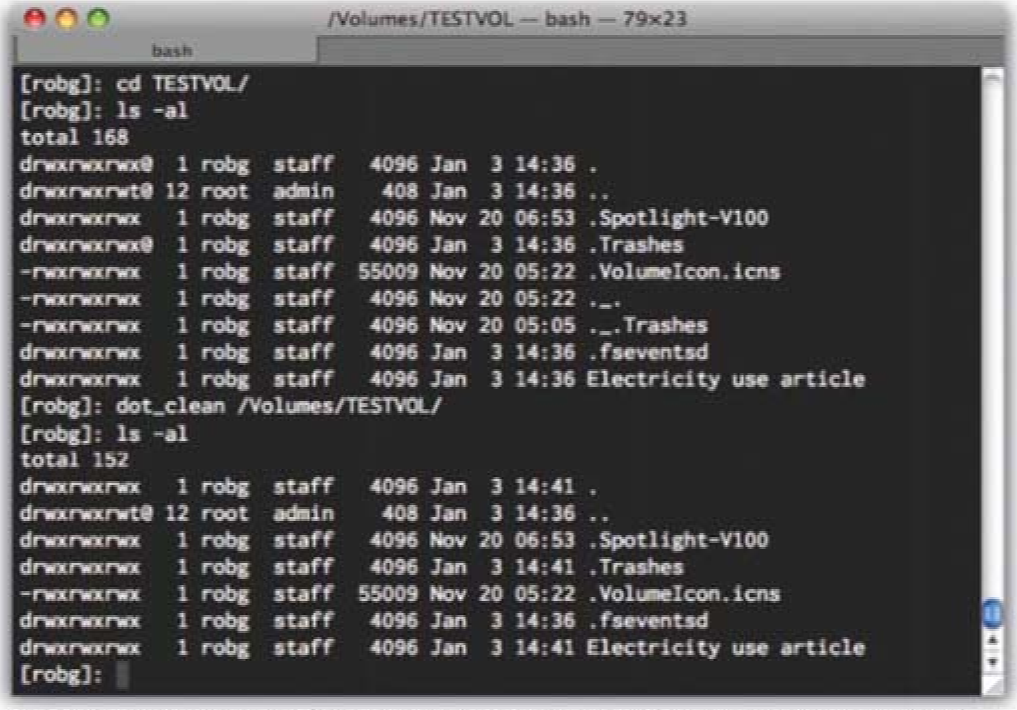
Rich Mogull is an independent security consultant who blogs on security issues at Securosis.com. He is also a contributing editor at TidBits.

Leopard's Unix Tricks

The handy new command-line programs in Leopard BY ROB GRIFFITHS

Mac OS X 10.5 includes a number of changes to its Unix core, perhaps more than in any prior OS X release. Many of the changes are routine—updated versions of key Unix programs such as the bash shell (from 2.0.5b to 3.2), the `vi` text editor (from version 6.2 to 7.0), and even the `man` manual page reader (from 1.501 to 1.6c). Most of these alterations, however, will be invisible to the casual Terminal user—though the new versions may contain some additional features, the programs will still work as they did before.

More interesting are the totally new (or substantially revised) Unix commands in 10.5. Here are my picks for the five most interesting and useful ones.



```
[robg]: cd TESTVOL/
[robg]: ls -al
total 168
drwxrwxrwx@  1 robg  staff   4096 Jan  3 14:36 .
drwxrwxrwt@ 12 root  admin    408 Jan  3 14:36 ..
drwxrwxrwx   1 robg  staff   4096 Nov 20 06:53 .Spotlight-V100
drwxrwxrwx@  1 robg  staff   4096 Jan  3 14:36 .Trashes
-rwxrwxrwx   1 robg  staff  55009 Nov 20 05:22 .VolumeIcon.icns
-rwxrwxrwx   1 robg  staff   4096 Nov 20 05:22 ._.
-rwxrwxrwx   1 robg  staff   4096 Nov 20 05:05 ._.Trashes
drwxrwxrwx   1 robg  staff   4096 Jan  3 14:36 .fseventsd
drwxrwxrwx   1 robg  staff   4096 Jan  3 14:36 Electricity use article
[robg]: dot_clean /Volumes/TESTVOL/
[robg]: ls -al
total 152
drwxrwxrwx   1 robg  staff   4096 Jan  3 14:41 .
drwxrwxrwt@ 12 root  admin    408 Jan  3 14:36 ..
drwxrwxrwx   1 robg  staff   4096 Nov 20 06:53 .Spotlight-V100
drwxrwxrwx   1 robg  staff   4096 Jan  3 14:41 .Trashes
-rwxrwxrwx   1 robg  staff  55009 Nov 20 05:22 .VolumeIcon.icns
drwxrwxrwx   1 robg  staff   4096 Jan  3 14:36 .fseventsd
drwxrwxrwx   1 robg  staff   4096 Jan  3 14:41 Electricity use article
[robg]: 
```

No More Dot-Underscore Files Using a new Unix program in OS X 10.5, you can remove those pesky dot-underscore files from folders you copy to non-Mac systems.

Those Pesky Dot-Underscore Files

If you've ever used a USB memory stick to move files to a Windows or Linux machine, or written files to a server that doesn't use the Mac's HFS file system, you're probably familiar with the "dot-underscore files" that are created when you do so; depending on what you did to the files and/or folders on the Mac, you will see any number of file names that begin with dot-underscore (._), followed by the names of the other folders on the disk. The Mac uses these files on its HFS disk, but they are useless on other systems.

Prior to 10.5, you had to manually delete them on the other system, or use Terminal trickery to remove them on the Mac prior to copying. As of 10.5, though, you can just use the `dot_clean` command on the directory in question. Type `dot_clean /path/folder` to join the dot-underscore files with their parent files. Read OS X 10.5's manual pages (`man dot_clean`) for more information.

Learn about Kernel Extensions

Kernel extensions (also known as *kexts*) are low-level pieces of code that talk directly to the heart of the Mac operating system. They are powerful and potentially dangerous: if there's a bug in a kernel extension, it can crash your Mac. (At worst, a buggy program can crash only itself.) In 10.5, you can use the `kextfind` command to find out which kernel extensions are on your machine.

Most of the kernel extensions on your Mac are bundled with OS X; you can see exactly what's installed by using the command `kextfind -case-insensitive -bundle-id -substring 'com.apple.' -print | more`.

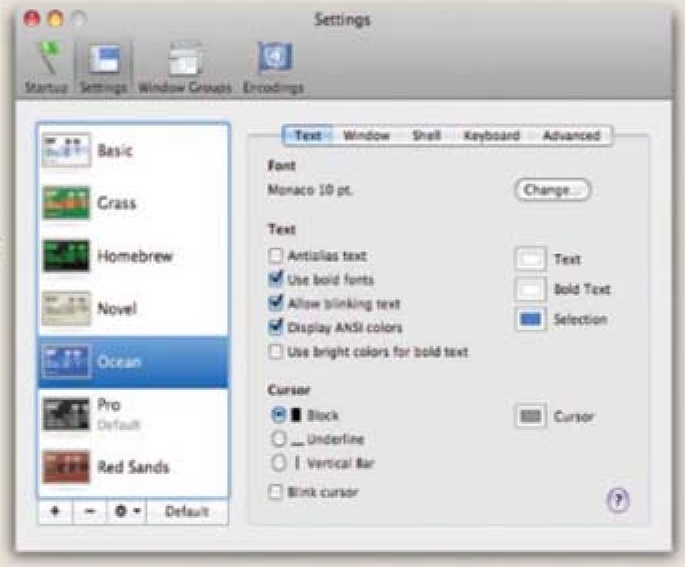
While that command may look intimidating, it's actually pretty straightforward. The `-case-insensitive` argument tells the system to find all matches, regardless of capitalization. Next, `-bundle-id` and `-substring` tell kextfind to look for the text string `'com.apple.'` in the extension's bundle identifier. The `-print` switch tells kextfind to output the results to the screen, while `| more` tells Terminal to pause after each page of output. You can see a list of third-party kernel extensions by inserting `-not` and a space before `-bundle-id` in the command above.

Just because an extension is listed, however, doesn't mean it's active. To see which of your third-party extensions are active, type `kextfind -loaded -not -bundle-id -substring 'com.apple.' | more`. This is similar to the other command, with the addition of the `-loaded` flag, which tells it to list only those extensions that are currently active.

If you're experiencing kernel panics, this list is a good place to start looking for suspects; if you see a likely candidate, try removing the device or program associated with the extension and then rebooting. If your kernel panics vanish, you've found the source of the problem. The **`man kextfind`** manual pages have a lot of good examples of other uses for this command.

Terminal Themes

OS X 10.5 offers a slew of new options for customizing the appearance and behavior of your Terminal windows. Select Terminal: Preferences, and click on the Settings tab to tweak the appearance of text and windows, adjust the behavior of the shell, assign keyboard shortcuts, and more. Even better, you can change the program's look-and-feel by selecting one of the built-in themes.



Font
Monaco 10 pt.

Text
☐ Antialias text
☑ Use bold fonts
☑ Allow blinking text
☑ Display ANSI colors
☐ Use bright colors for bold text

Cursor
● ▮ Block
○ _ Underline
○ | Vertical Bar
☐ Blink cursor

Dig into Installer Packages

Apple's installer keeps track of things it installs—you can see everything it's done by looking at the /Library/Receipts folder. From there, you can dig into packages and see what's been installed. However, rooting around in that folder by hand isn't much fun—it requires lots of **`cd`** and **`lsbom`** commands. OS X 10.5's new **`pkgutil`** command simplifies things.

To see a list of installed packages, just type **`pkgutil –pkgs`** and press return. Each entry in the list represents a package ID; you can use that string to get more information on any particular package. For instance, if you'd like to know every file that was installed with the recent security update, just type the following (but without the line breaks), and then press return:

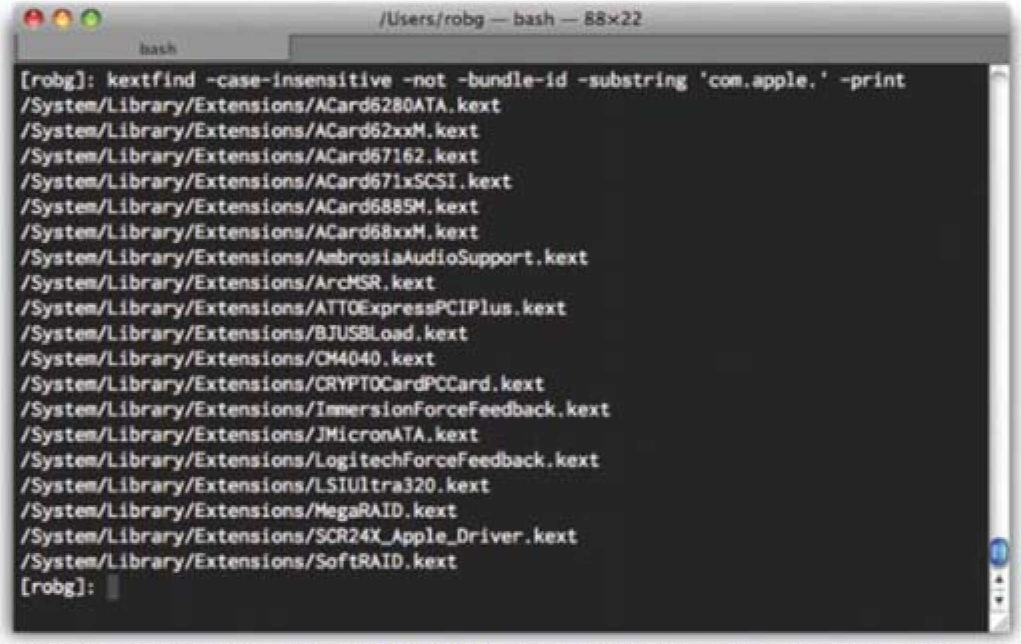
```
pkgutil –files com.apple.pkg
.update.security.2007
.009 | more
```

Set System and Network Preferences

OS X 10.5 has two utilities, **`systemsetup`** and **`networksetup`**, that allow you to view and configure various network and machinewide System Preferences settings. These programs aren't new in 10.5—they were available in 10.4, too. But in 10.4, they were buried deep in the System folder. As of 10.5, Apple has placed them in a standard Unix folder, making them easily accessible to everyone.

So what can you do with them, and why would you want to do those things?

One way these programs are useful is in managing remote connections. Say you've used **`ssh`** to connect to a remote Mac. You might then need its Ethernet card's MAC address to set up a router. To get that information, type **`sudo networksetup –getmacaddress en0`**. (You need to type **`sudo`** to claim the administrative privileges required for these commands.) Want to see what network services are available on the remote Mac? Type **`networksetup -listallnetworkservices`**. You can then use the names of those services in other commands, such as the following, which displays the list of DNS servers on the remote Mac: **`sudo networksetup -getdnsservers "ethernet 1"`**. If you wanted to change those DNS servers, you'd use the **`-setdnsservers`** option.



```
[robg]: kextfind -case-insensitive -not -bundle-id -substring 'com.apple.' -print
/System/Library/Extensions/ACard6280ATA.kext
/System/Library/Extensions/ACard62xxM.kext
/System/Library/Extensions/ACard67162.kext
/System/Library/Extensions/ACard671xSCSI.kext
/System/Library/Extensions/ACard6885M.kext
/System/Library/Extensions/ACard68xxM.kext
/System/Library/Extensions/AmbrosiaAudioSupport.kext
/System/Library/Extensions/ArcMSR.kext
/System/Library/Extensions/ATTOExpressPCIPlus.kext
/System/Library/Extensions/BJUSBLoad.kext
/System/Library/Extensions/CM4040.kext
/System/Library/Extensions/CRYPTOCardPCCard.kext
/System/Library/Extensions/ImmersionForceFeedback.kext
/System/Library/Extensions/JMicronATA.kext
/System/Library/Extensions/LogitechForceFeedback.kext
/System/Library/Extensions/LSIUltra320.kext
/System/Library/Extensions/MegaRAID.kext
/System/Library/Extensions/SCR24X_Apple_Driver.kext
/System/Library/Extensions/SoftRAID.kext
[robg]: 
```

Third-Party Extensions Using the **`kextfind`** program, you can see exactly what third-party kernel extensions you have installed.

The **`systemsetup`** command is similarly useful. For instance, you can see the settings for your computer and display system sleep times with **`systemsetup -getcomputersleep`** and **`systemsetup -getdisplaysleep`**. To change the display sleep setting to four minutes, you'd type **`systemsetup -displaysleep 4`**.

You can see which of the disks start up a Mac by typing **`systemsetup -liststartupdisks`**; also, you can change a startup disk with the **`-setstartupdisk`** option; you follow this option with the path to that disk's CoreServices folder, as displayed in the **`-liststartupdisks`** option.

Both of these commands have lots of additional features—check out **`man systemsetup`** and **`man networksetup`** for a thorough explanation of all of their capabilities. ☒

Rob Griffiths is a senior editor at *Macworld*.

Help Desk

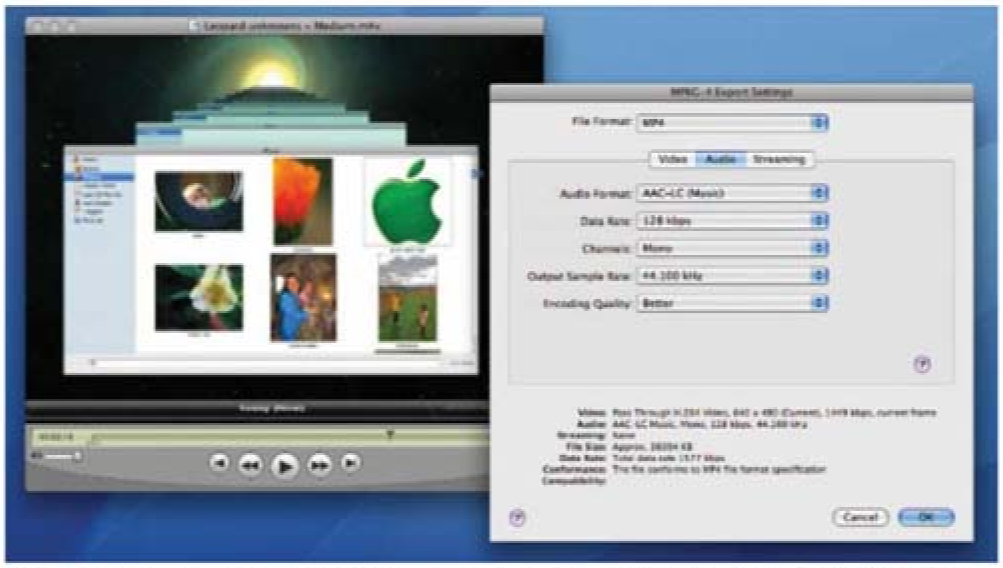
Mac 911

Solutions to your most vexing Mac problems **BY CHRISTOPHER BREEN**

One-Sided iMovie Audio

Q: The Radio Shack lapel microphone attached to my camcorder produces left-channel-only audio. Do you know how to turn that into a standard mono audio track that plays through both of the channels?

Via the Internet


MPEG-4 Export Settings

File Format: MP4

Audio Format: AAC-LC (Music)

Data Rate: 128 kbps

Channels: Mono

Output Sample Rate: 44.100 kHz

Encoding Quality: Better

Mono Audio Convert a one-sided stereo audio track to a two-sided mono track in QuickTime Pro.

A: I have the same issue when I record my share of *Macworld* videos. The microphone you refer to is mono and records to only one channel. Although you could piece together an adapter that places audio on both channels, you can also fix it while exporting your video. I do it this way.

After I've completed my iMovie '08 project, I export it by choosing Share: iTunes, choosing the Medium size option, and clicking on Publish. This creates a 640-by-360-pixel (or 640-by-480-pixel, depending on the aspect ratio) .m4v file. Open that file in Apple's $30 QuickTime Pro (macworld.com/3283) and choose File: Export. In the Save Exported File As dialog box that appears, choose Movie To MPEG-4 from the Export pop-up menu and then click on Options.

In the resulting MPEG-4 Export Settings dialog box, choose MP4 from the File Format pop-up menu at the top of the window and select Pass Through from the Video Format pop-up menu in the Video tab. Doing this tells QuickTime to leave the original video track alone. Now click on the Audio tab. In that tab, choose Mono from the Channels pop-up menu and click on OK (see "Mono Audio"). Click on Save in the Save Exported File dialog box, and the file will retain its original video yet now have a mono sound track that plays on both channels.

Ah, but what if all the audio in your movie is in stereo *except* the part that you've recorded with your camcorder, and you'd like to retain the movie's stereo soundtrack? If you follow the steps above, the entire soundtrack will be in mono. In this case, you need to convert the camcorder material before it leaves iMovie.

You can do this in iMovie by control-clicking on a hunk of video you have pulled from your camcorder and choosing Reveal In Finder from the contextual menu. The clip will appear in the Finder. Open it in QuickTime Pro and press ⌘-J to see its properties. Select Sound Track and click on the Audio Settings tab. In the Channel Assignment column, choose Mono for both channels from the Assignment pop-up menu and save the movie. Import this saved copy into iMovie and use it rather than the original.

Strange Horizontal Lines

Q: Ever since upgrading to Leopard, I occasionally see a thin black horizontal line that runs across part of my screen. The line appears in the Finder, Word, Mail—you name it—so it doesn't seem to be program based. Also, I didn't see it when I was using Tiger, so it seems unlikely that there's a hardware problem (or at least not hardware alone).

Candace Turner

A: I believe you're closer to the mark with the supposition "or at least not hardware alone." I suggest this

Have a problem? Go to the Mac 911 forum (macworld.com/2467) for help with your misbehaving Mac or applications.

> take our survey

○ a
○ b
● c

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because my Mac Pro running OS X 10.4 (Tiger) has exhibited this same problem on rare occasions. I've discovered that the issue appears to be related to heat and a particular graphics card.

Specifically, if your Mac holds a revision 1 ATI Radeon X1900 XT graphics card, it could display these horizontal lines on your screen. They seem to appear more often when the graphics card is running hot. It tends to do so more often under OS X 10.5 (Leopard) than under Tiger because Leopard taxes the card to a greater extent, thanks to its many swoopy graphics effects.

To determine the revision of your ATI Radeon X1900 XT graphics card, launch System Profiler (found in /Applications/Utilities), select the Graphics/Displays item in the Contents column, and take a look at the Revision ID entry. Those with ID 0x0000 are revision 1 cards. If you can extract your graphics card—as you can from a Mac Pro, for example—switch off your Mac, ground yourself by touching the metal case, and take the card out. Check the card's cooling fan—in all likelihood it's caked with dust. Use a can of compressed air to blow away that gunk. While you have the Mac open, take a gander inside and see if there are other clumps of dust that might be blocking its fans. If so, clean them out.

If that doesn't solve your problem (or if you have a model such as an iMac that doesn't let you access its innards), contact Apple. There are reports of Apple swapping out revision 1 cards for people with troubled Macs under warranty or an AppleCare agreement. The revision 2 cards that replace them seem to work without incident.

Bugs & Fixes

BY TED LANDAU

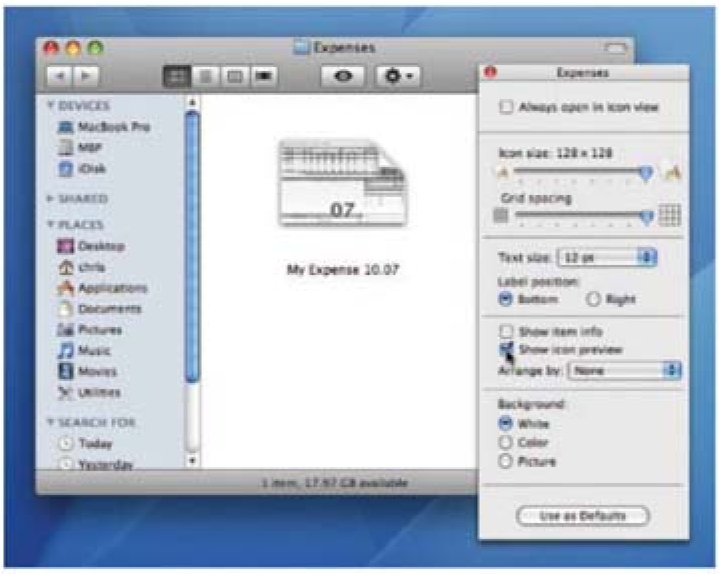
Home Folder MIA If you open the Users folder (at the root level of your hard drive), you should see your Home folder there—it's the one labeled with your account name. If it's missing after you upgrade to Leopard, don't panic. It's still there—just hiding. To make it visible again, launch Terminal (in /Applications/Utilities) and enter `chflags nohidden ~` at the prompt.

Update Cuts Off Wi-Fi Access After installing the Login and Keychain Update 1.0 for Leopard (macworld.com/3353), you may no longer be able to connect to wireless networks. The solution is to restart your Mac in Safe mode (by holding down the shift key at startup), and then restart again normally.

iPhone Won't Restore If you try to make a fresh start by using iTunes to restore your iPhone to factory settings, you might get the error "Unable to restore iPhone. Unknown error (6)." If so, update to the latest version of iTunes. If that doesn't fix the problem, the most likely cause is that one or more of the .ipsw files, located in *your user folder*/Library/iTunes/iPhone Software Updates, are damaged. The solution is to delete the files and try the Restore command again. New copies of the files will download, and the process should proceed as expected.

Finder Crashes In Mac OS X 10.5 (Leopard), you can give different people different kinds of access to a file. Select the file in the Finder and choose File: Get Info. Then click on the plus-sign (+) button in the Sharing & Permissions section at the bottom of the window to bring up a list of users and groups. Unfortunately, if you upgraded to Leopard from Tiger, clicking on this button may instead cause the Finder to crash. If so, you need to upgrade to OS X 10.5.2, which fixes this bug. Go to the Apple menu and select Software Update to download it.

Senior Contributor **Ted Landau** is the founder of MacFixIt (www.macfixit.com) and the author of *Take Control of Troubleshooting Your iPhone* (TidBits Publishing, 2007). Share your problems at bugs@macworld.com or on Macworld.com's Mac 911 forum.



Expenses

☐ Always open in icon view

Icon size: 128 × 128

Grid spacing

Text size: 12 pt

Label position:

● Bottom ○ Right

☐ Show item info

☑ Show icon preview

Arrange by: None

Background:

● White

○ Color

○ Picture

Use as Defaults

No Icon Preview The View menu's Show View Options command is the key to disabling Leopard's icon previews.

Turn Off Leopard Icon Previews

Q: A lot of people have said how great it is that Leopard shows the contents of a document in its icons, but I find this distracting and not always helpful. For example, these icons don't help me tell one complex Excel document from another. Is there some way to turn off icon previews?

Bill Leonard

A: Double-click on your hard-drive icon on the Mac's desktop and choose View: Show View Options. Then deselect the Show Icon Preview option and click on Use As Defaults at the bottom of the window (see "No Icon Preview"). You should no longer see icon previews in icon, list, and column views. On my Mac, deselecting this option has no effect on Cover Flow view.

If you don't want to disable icon previews in all Finder windows but prefer to select which folders display icon previews, you can open a particular folder, again choose View: Show View Options, and then deselect the Show Icon Preview option *without* also clicking on Use As Defaults.

Senior Editor **Christopher Breen** is the author of *The iPhone Pocket Guide* and *The iPod and iTunes Pocket Guide*, third edition (both Peachpit Press, 2007).

ICONS BY PAUL HOWALT

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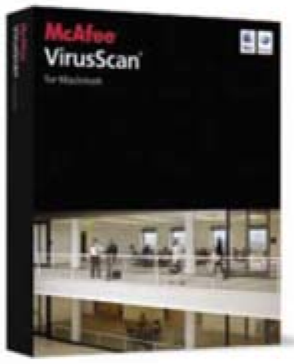
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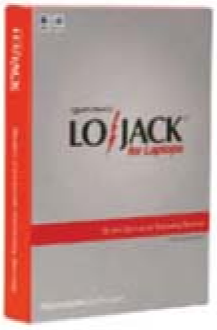

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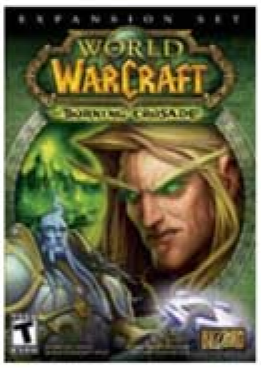

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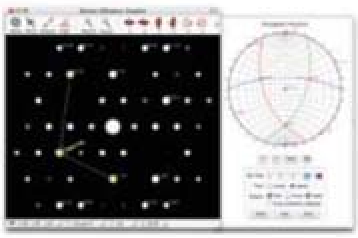

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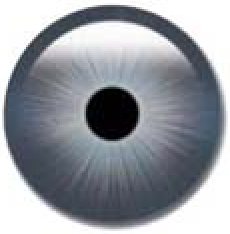

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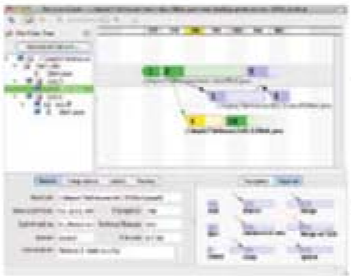

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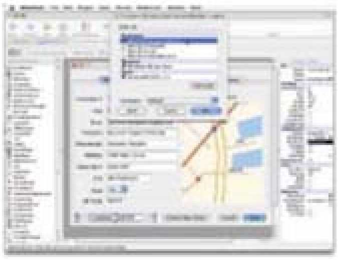

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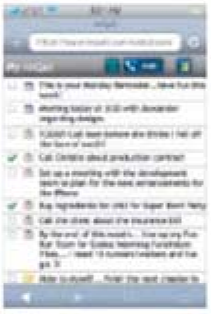

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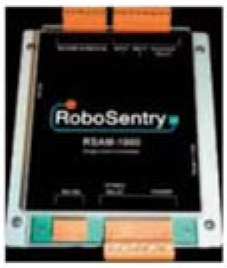

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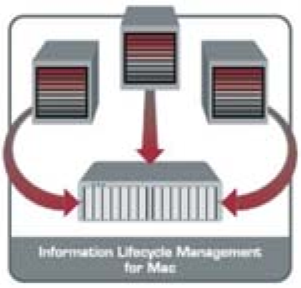

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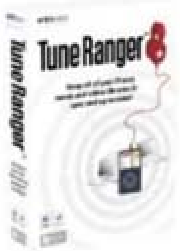

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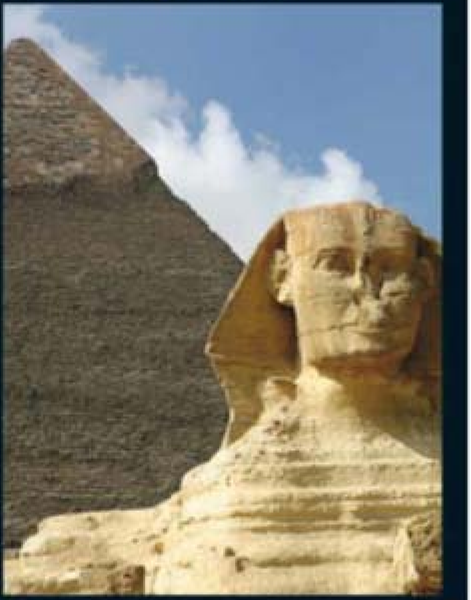

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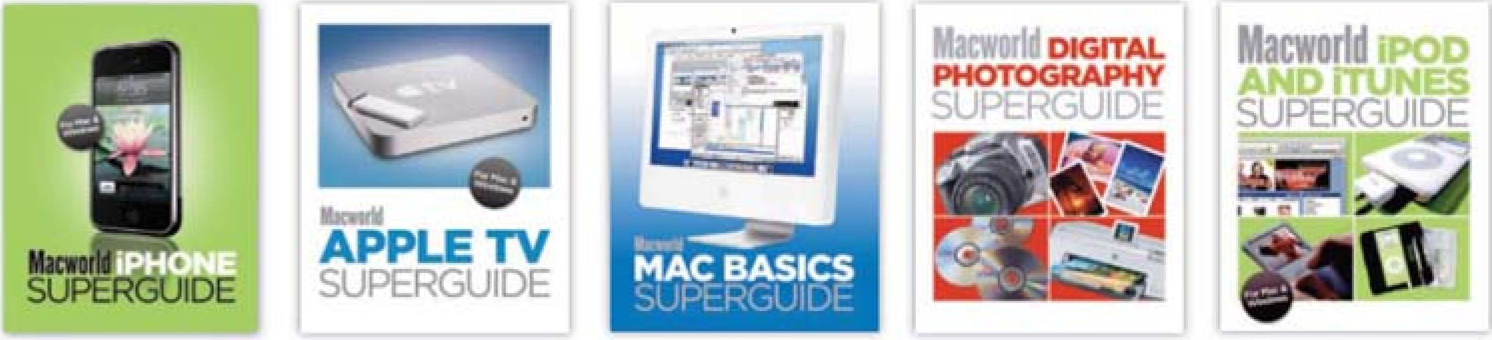
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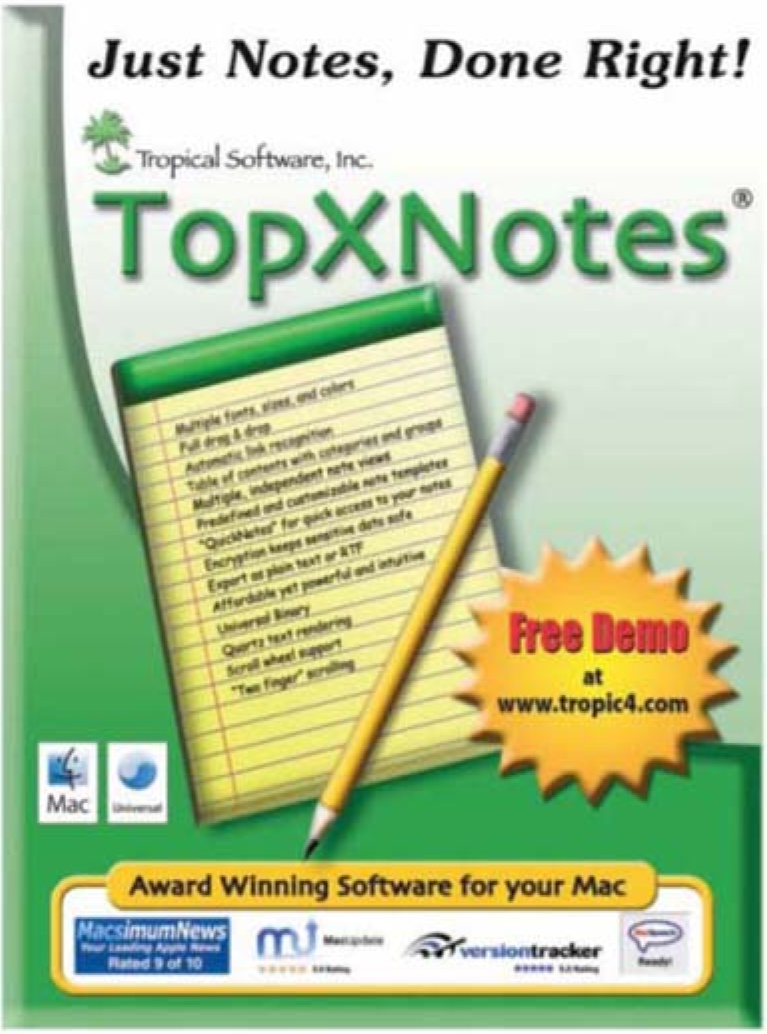

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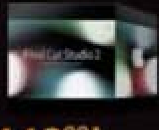

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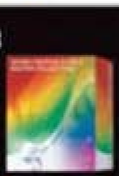

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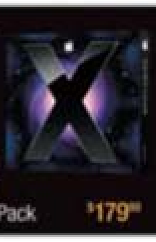

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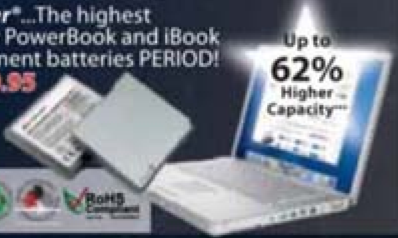

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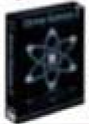

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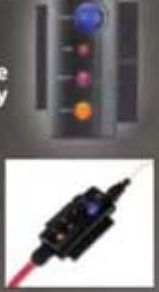

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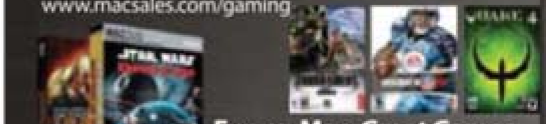

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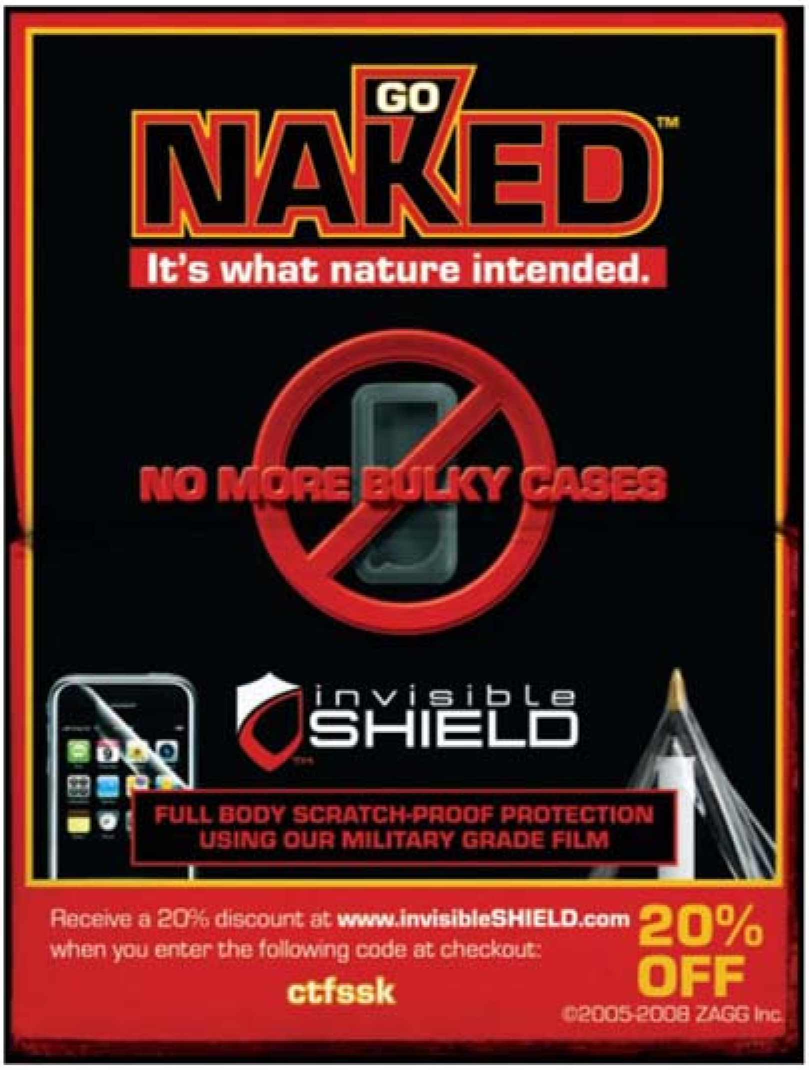

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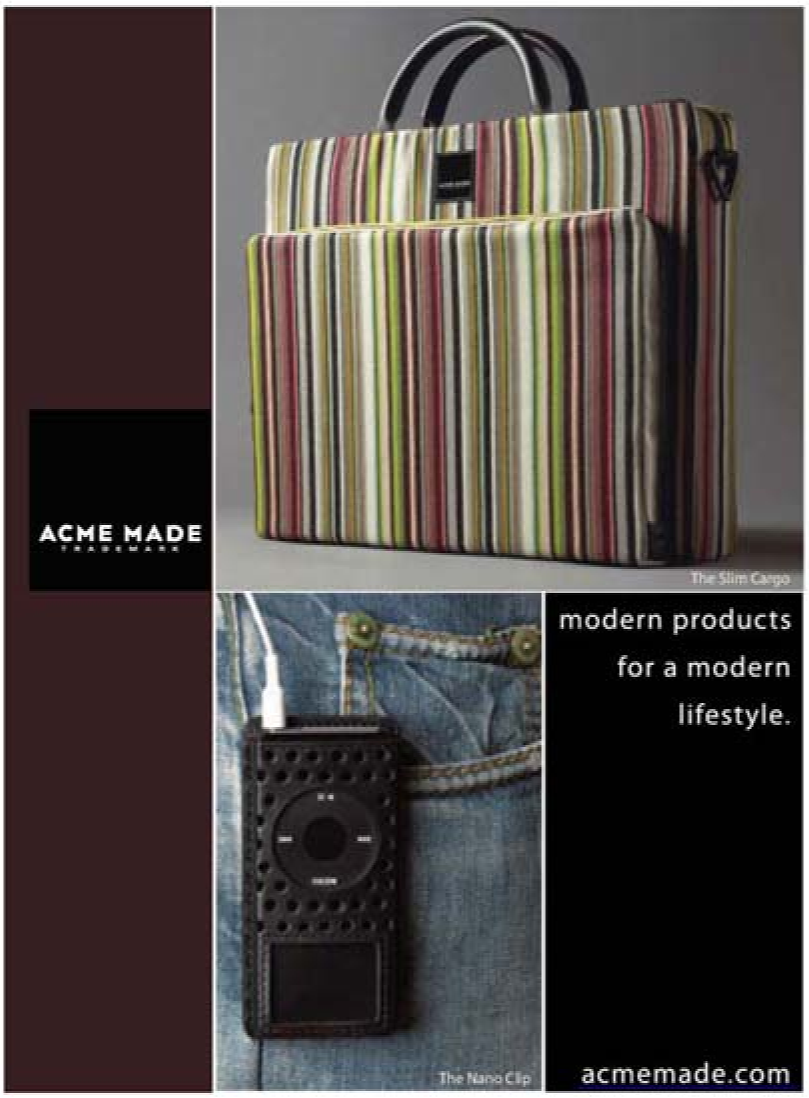

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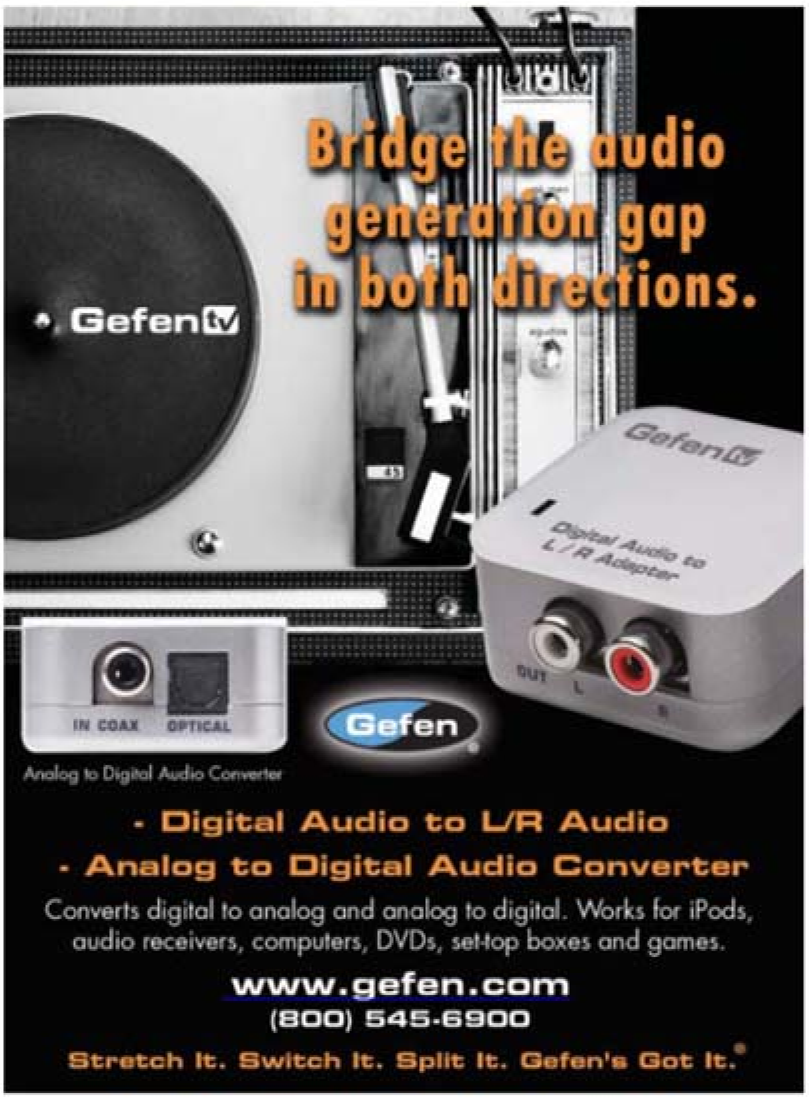

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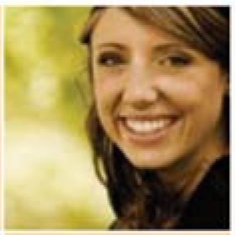

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SPOTLIGHT By John Gruber

What's in a Name?

Even Apple's branding just plain works

Imagine for a moment that you know nothing about Apple's notebook lineup.

Perhaps you suffered a concussion when your previous notebook fell on your head, or—more likely—you're a fed-up-with-Windows would-be switcher. Whatever the reason, you know so little about Apple's notebook lineup that you don't even know they're all called MacBooks.

What's remarkable is that you could still walk into an Apple store—or dial up Apple's online store in your browser—and with no outside research whatsoever buy the right Mac laptop to meet your needs. Your commonsense hunch after reading nothing more than the names of products would be spot-on correct.

The same self-evident naming scheme applies to Apple's desktops (Mac mini, iMac, and Mac Pro) and iPods (shuffle, nano, classic, and touch). The names alone tell you what the products are and how they relate to each other; they make it easy to buy.

Simplicity Everywhere

As the sort of person who *does* know something about the Mac lineup, you might think everything I've said so far is incredibly obvious. But here's the thing: such easily understood product branding is almost nonexistent among Apple's competitors.

Dell offers at least five different notebook lines: Inspiron, XPS, Precision, Latitude, and Vostro. Sony offers six different lines of Vaio notebooks: TZ, SZ, CR, FZ, NR, and AR. The names tell you nothing about the laptops; they sound more like abbreviations for obscure states from the former Soviet Union.

The experience of buying a laptop from Apple, on the other hand, is every bit as well designed as the laptops themselves. The same adjectives that apply to Apple's products—*simple, obvious, elegant, thoughtful*—apply to Apple's branding.

It wasn't always like this at Apple. Just ask any longtime Mac user about the Performa era. But ever since the iBook and PowerBook lineups, followed by the MacBook and MacBook Pro models, Apple has been making it easier for its customers to understand its Mac offerings.

Apple doesn't force you to figure out the difference between, say, a Vaio SZ660N and a Vaio SZ440N66. Products within a given Mac product line are simply differentiated by their specs—CPU speed, color, screen size, and storage capacity.

Fewer Names, Fewer Products

The trade-off, though—and there's always a trade-off—is that Apple's product lineups are deliberately sparse. The company's goal is to satisfy as many customers as possible with the fewest number of products. It's a lot less likely that Apple makes a Mac that's perfect for you. Take, for example, the gap that exists between the Mac mini and the Mac Pro: many Mac buyers would like to see something with the specs of the iMac but without the built-in display.

> **The names alone tell you what the products are and how they relate to each other.**

Until recently, the other big gap was at the small end of the MacBook line. Rumors of a new ultraportable MacBook began back in 2006, when Apple dropped the 12-inch PowerBook G4. But *ultraportable* meant different things to different people. Some wanted lighter, some wanted thinner, some wanted a smaller footprint (and thus a smaller screen). Some wanted cheaper (like the 12-inch iBook) and some wanted as much performance as could fit inside (like the 12-inch PowerBook). What we got with the MacBook Air is something else: lighter, thinner, and more elegantly designed, with compromises in performance and expandability.

It won't hurt Apple that some Mac users are disappointed in the MacBook Air. If you're going to buy a Mac no matter what, Apple doesn't need to make one that's exactly what you want. You'll just buy the one the company does offer that comes closest. Apple doesn't have to mimic PC makers, who are driven to offer complex product arrays out of fear that gaps in their lineups will drive customers to competitors.

What Apple has needed is a notebook that appeals to customers who might not have otherwise bought a Mac portable at all. The MacBook Air is that machine. It's far better than the MacBook or MacBook Pro as secondary machine for users who already have a nice Mac desktop. It may sacrifice expandability, but it offers simplicity and elegance—two factors at the core of Apple's appeal to Windows users. For fence-sitting switchers who are thinking, "Man, things do look easier and simpler on the Mac," the MacBook Air is just what they were waiting for.

John Gruber writes and publishes the Mac blog Daring Fireball (daringfireball.net).

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